Alpha Fetoprotein and Ultrasound in the Prenatal Diagnosis

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ABBREVIATIONS

AFP	alpha fetoprotein
AF	amniotic fluid
AFAFP	amniotic fluid AFP
AFM	alpha albumin
CVS	chorionic villus sampling
DEGUM	Deutsche Gesellschaft für Ultraschall in der Medizin (German society for sonography in medicine)
DS	Down syndrom
FISH	fluorescence in situ hybridization
HCG	human choriongonadotropin
MSAFP	maternal serum alpha fetoprotein
MoM	multiple of median
NTD	neural tube defect
PAPP-A	pregnancy-associated plasma protein A
SSW	week of gestation (abbreviation from German: Schwangerschaftswoche)
US	Sonography (abbreviation from German: Ultraschall)
UE3	unconjugated estriol
WOG	week of gestation
NT	nuchal translucency

SUMMARY

This work aimed to assess AFP test and US as methods of prenatal diagnostics, along with ACHE. AFP test is known since the 70 s and used mainly to detect NTDs together with US, and to detect DS as a part of the triple test.

Upon this a question was raised, if the AFP test is still necessary in the prenatal diagnostic, considering that the test is not paid by health insurance in Germany, and the results of this test must be confirmed with US anyway.

The results of AFP test of 3.119 females for the period between the 11th and 36th WOG were deployed in this study. These women were examined in the university hospital of Jena.

Not all enhanced AFAFP results could be compared with their US results or outcome. Nevertheless it could be shown that the AFP test is neither an effective approach to detect NTDs nor to obtain hints on chromosomal aberrations. Moreover, it has to be stated that AFP test as an invasive test was accompanied with side effects which are not presented by US. Overall, AFAFP test is not considered as a cost-effective or reliable approach and should be omitted.

ZUSAMMENFASSUNG

Durch diese Arbeit wollte ich prüfen, ob das Durchführen vom AFP Test in der pränatalen Diagnostik noch sinnvoll ist. Darüber hinaus wird der AFP Test nicht von den Krankenkassen bezahlt.
ACHE Test wird empfohlen, wenn die AFP Testergebnisse höher als 1.7 sind.
AFP Test ist seit den siebziger Jahren bekannt, und wird hauptsächlich zur Früherkennung von NTD und DS im Rahmen vom Tripel Test durchgeführt.

Diese Arbeit ist retrospektiv, daran haben sich 3.119 Frauen zwischen der 11. und 36. SSW beteiligt. Diese Frauen wurden im Universität Klinikum Jena untersucht.

Nicht alle hohe AFP Ergebnisse konnten mit ihren US Befunden oder mit ihren klinischen Ergebnissen verglichen werden, trotzdem hat es sich gezeigt dass der AFP Test keine effektive Methode ist, weder in der Erkennung vom NTD noch vom DS. Überdies ist der AFP Test eine invasive Methode, die mit mehreren Komplikationen vergesellschaftet als US ist.

1. INTRODUCTION

1.1. PRENATAL DIAGNOSTICS

Medicine has advanced in many fields in the last few decades; this is especially valid for the available screening tools of prenatal diagnostics. The later enable physicians to perform a rather detailed diagnostic of an unborn fetus, which was not more than a science fiction for film producer of 'Star Wars' in 1973. For George Lucas, it was out of his imagination that it would be possible in future to predict a twin pregnancy (Stover)

Today, prenatal diagnostics have made a multitude of approaches to acquire information about the fetus available. There are on the one hand invasive approaches like chorionic villi sampling (CVS) ; (Rosner et al., 2013), amniotic fluid (AF) and umbilical cord blood acquisition (Auerbach, 1994; Manfred Stauber, 2007). Besides cytogenetics (Maeda et al., 2014) and molecular genetic (Haspel, Vege, Michelle, Kaufman, & Westhoff, 2006), biochemical tests (Thorlacius, Blakney, Krahn, Bamforth, & Higgins, 2006) may be done, including alpha fetoprotein (AFP) test (Cohen et al., 2014; Wright, Syngelaki, Bradbury, Akolekar, & Nicolaides, 2014). On the other hand there are more and more non-invasive approaches available like: sonography, high resolution sonography, Doppler-sonography, first trimester screening (Kiechle, 2007), analysis of cell-free fetal DNA in maternal plasma or serum, approaches which utilize fetal cells within the maternal circulation as a source of fetal DNA (Sekizawa et al., 2007).

Amniocentesis has been available for several decades now. Since the early 1970s prenatal diagnosis of congenital anomalies was primarily aimed to detect chromosomal abnormalities by amniocentesis (Crystle & Rigsby, 1970). In the past 20 years, the prenatal diagnostic tests have witnessed a considerable change due to the development of sonography as a non-invasive screening method (Steele & Breg, 1966; Todros, Capuzzo, & Gaglioti, 2001) and it is still routinely done in many instances in Germany.

Here the question is raised, studied and discussed if AFP test is on the way to become obsolete or still a test worth to be done.

1.2. INDICATIONS

Prenatal diagnostics are indicated in the following instances:

1. Advanced maternal age:
   There is a positive correlation between maternal age and numerical chromosomal abnormalities (Fig. 1), therefore advanced maternal age is an indication for invasive prenatal diagnostics (Sirivatanapa et al., 2000) (Ferguson-Smith & Yates, 1984), And is to be considered the main reason to have amniocentesis (Grinshpun-Cohen, Miron-Shatz, Ries-Levavi, & Pras, 2014)

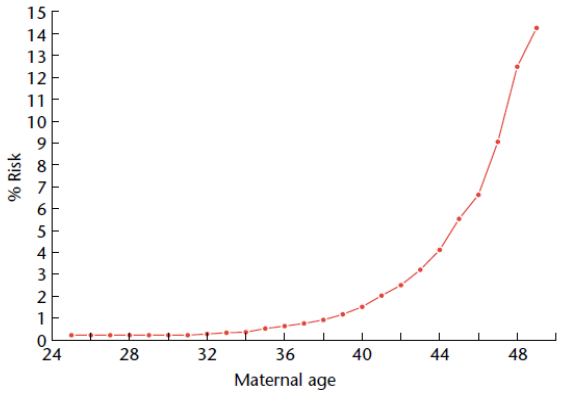

Fig 1. The Risk of chromosomal abnormalities by rising maternal age.
"The estimated rate of all clinically significant cytogenetic abnormalities rises from about 2 per 1000 (1 per 500) at the youngest maternal ages to about 2.6 per 1000 (1 per 270) at age 30, 5.6 per 1000 (1 per 80) at age 35, 15.8 per 1000 (1 per 60) at age 40, and 53.7 per 1000 (1 per 20) at age 45."(Hook, 1981)

2. Repeated abortions, defined as three or more miscarriages of the same couple. About half of miscarriages, including very early pregnancies, are due to chromosome aberration (Sutherland, 1996). It is recommended that parents who had three or more miscarriages analyze their fetal chromosome if they would like to have children (Moore & Best, 2001).

3. Patients with known chromosomal aberration in the family
   Some chromosomal aberrations include segregation in a family pedigree which makes an invasive prenatal diagnostics a reasonable approach. An example of such abnormality is a familial Robertsonian translocation including chromosome 21 (Sirivatanapa et al., 2000) (Binns & Hsu, 2001).

4. Ethnic groups with high risk for genetic disease
   Some ethnic groups may have higher rates of certain gene-mutations due to inbreeding, genetic drift, and/or migration. For instance, Tay–Sachs disease is known to be more common in the Ashkenazi Jews compared to the general population (Hoffman et al., 2014; Welch-Carre, 2005).

5. Teratogens

Infectious diseases (e.g. toxoplasmosis, rubella), and/or an exposure to other factors like alcohol, smoking, medications or radiation might be teratogenic (Siala et al., 2014).

6. Abnormal ultrasound findings
   Such findings are considered to be an indication for noninvasive prenatal diagnosis (Haymon, Simi, Moyer, Aufox, & Ouyang, 2014).

1.3. METHODS OF PRENATAL DIAGNOSTICS

Prenatal diagnostics can be invasive or noninvasive. While invasive procedures may answer questions such as the presence of a karyotype with three chromosomes 21, noninvasive procedures mainly provide risk figures. However, invasive methods have a certain risk of fetal loss which is discussed below. Therefore, non-invasive approaches are often favored and attempts are made to improve the reliability and resolution of such approaches (Binns & Hsu, 2001) .

1.3.1. INVASIVE PROCEDURES:

1. Chorionic villus sampling (CVS):

First used in the 1980s, CVS can provide information on fetal chromosome status based on cell culture and banding cytogenetics (Laksanavilai et al., 2013; Manfred Stauber, 2007). CVS biopsies are taken under US control transabdominally or transcervically, and samples can be analyzed by means of cytogenetic, biochemical or molecular Techniques (Vega Hernandez, Hicks, & Gonzalez-Angulo, 1991). The risk of fetal loss associated with this procedure is about 1.9% (Tabor, Vestergaard, & Lidegaard, 2009), and is considered to be higher in transcervically CVS (Baumann, Jovanovic, Gellert, & Rauskolb, 1991; Smidt-Jensen & Philip, 1991). However, it has lower false positive rate than triple test screening (Song et al., 2013), and provides a tool to for early prenatal screening namely in the first trimester with relatively fast result, therefore it is the procedure of choice for the first trimester (Wilson, 2000). A contamination with maternal cells during this examination raises the risk of mosaicism (Gnys-Wiercioch et al., 2012)

2. Amniocentesis

Acquisition of amniotic fluid (AF) was first done in 1952 to diagnose hemolytic disease prenatally; this was done without sonographic control. In the 1970s it was first used to obtain karyotypes; which is possible because AF contains live fetal cells that can be cultured. These cells are mainly derived from skin and urinary system. (Manfred Stauber, 2007).
This examination is performed by inserting a needle into the amniotic sac under US guidance through the mother's abdomen or uterus, and about 20 ml AF is acquired. Possible complications include injury from needle, bleeding, infections, as well as miscarriages which happen at a rate of 0.78 % (Borrelli et al., 2006). Second Trimester Amniocentesis is considered to be safer than transcervical CVS (Alfirevic, Gosden, & Neilson, 2000; Alfirevic, Sundberg, & Brigham, 2003) Moreover, This test enables the tester

to distinguish between open and closed NTD, which has a different prognosis (Husler et al., 2009; Leguy et al., 2011).

3. Percutaneous umbilical blood sampling

Umbilical blood sampling obtains blood from the fetal circulation and offers treatment approaches (Dunn, Weiner, & Ludomirski, 1988). This method is indicated to diagnose toxoplasmosis, hematological disorders, Fanconi anemia or to perform a rapid chromosomal analysis from a second tissue. Also, other biochemical parameters like oxygen I fetal blood may be determined (Binns & Hsu, 2001). An intrauterine fetal death within 2 days of the procedure reaches 1.6%, and spontaneous abortion in the next following 2 weeks reaches 0.7% (Buscaglia et al., 1996)

1.3.2. NON-INVASIVE PROCEDURES

All approaches that do not interfere with the integrity of the fetus or the amnion sac are considered as non-invasive. Therefore, taking maternal blood samples is not classified as an invasive procedure.

1. Sonography

Sonography is applied in the second trimester to discover structural anomalies of the fetus, and other abnormalities like ectop pregnancy (Brown & Doubilet, 1994), early diagnosis of intrauterine pregnancy (Bree et al., 1989; Cacciatore, Stenman, & Ylostalo, 1989) subfascial and bladder flap hematomas, retained products of conception, and ovarian vein thrombophlebitis (Di Salvo, 2003).

Sonography may be indicative of chromosomal disorders too as seen in Down syndrome. This non-invasive method should be used carefully to minimize the risk of its waves on the fetus, and it has to be used only when it is medically indicated, according to the ALARA principles (using the lowest output power consistent with acquiring the necessary diagnostic information and keeping the exposure time as low as possible for accurate diagnosis), (Abramowicz, Kremkau, & Merz, 2012; Newnham, Evans, Michael, Stanley, & Landau, 1993). Although a meta-analysis of the WHO showed that ultrasound in the pregnancy appears to be safe (Torloni et al., 2009).

There are two ways to perform this test, transabdominal and transvaginal, the latter showes more sensitivty (Cacciatore et al., 1989; Jain, Hamper, & Sanders, 1988).

Many techniques that based on transvaginal or abdominal sonography can be used in prenatal screening (Chang et al., 2012; Radulescu, Ulmeanu, Nedelea, & Oncescu, 2012), such as:

- Real time examination (Kaulfuss, Uhlich, Brabant, Blume, & Strittmatter, 1996):

It is considered to be the base of other examinations. It allows assessing:

- the integrity of pregnancy;
- the growth parameters and location of fetus, placenta and cervix;
- physical abnormalities; and
- possible underlying chromosomal aberrations (Sepulveda et al., 2004).

- Doppler sonography and duplex sonography:
  These methods measure the velocity of the blood in umbilical artery, both uterine arteries, and the fetal middle cerebral artery for example, which can assess
  - risk factors for developing an intrauterine growth restriction as a result of the lack of blood flow;
  - preeclampsia (Maulik, Lysikiewicz, & Sicuranza, 2002);
  - heart's hemodynamic parameters (Joern, Funk, & Rath, 1999);
  - risk factors for hypertonia; and
  - placental insufficiency.

  (Afrakhteh et al., 2014; Leftwich, Schmidt, Pham, Hibbard, & Wilkins, 2014)

  Doppler sonography in low risk population did not confer benefits (Alfirevic, Stampalija, & Gyte, 2010; Bricker & Neilson, 2000), however may enhance the fetal surveillance in diabetic pregnancies complicated by vasculopathy, fetal growth restriction or hypertension.(Wright et al., 2014)

- Three- and four-dimensional sonography anabels
  - Special depiction of the fetus in a three-dimensional presentation; if the presentation is done as a film it is called four-dimensional sonography (Kiechle, 2007; Kurjak, Azumendi, Andonotopo, & Salihagic-Kadic, 2007). This method is undisputable in cases of brain anomalies (Rizzo et al., 2011), facial clefts und spinal defects. It assesses the surface of the embryo/fetus with high precision (Merz & Abramowicz, 2012)

2. Maternal serum screening (Triple Test)

The triple test was first described in 1988 (Wald et al., 1988). Via this maternal serum screening, the concentration of AFP in maternal blood, human choriongonadotropin (HCG) and unconjugated estriol (UE3) are determined (Norgaard-Pedersen, Larsen, Arends, Svenstrup, & Tabor, 1990; Wald et al., 1988), and pregnancies with high risks are identified in the optimal cases. Blood samples are taken Between 14 and 20 WOG (Lamlertkittikul & Chandeying, 2007).
Table 1 shows how the 3 tested markers can give hints on two specific chromosomal abnormalities of the fetus, like DS in combination with maternal age (Demirhan et al., 2011), which is most evident before the 18th WOG (Crandall, Matsumoto, & Perdue, 1988; MacDonald, Wagner, & Slotnick, 1991).

In such chromosomal abnormalities, MSAFP is low, that is because of the impaired fetal kidney function and from impaired membrane or placental passage of AFP (Van Lith et al., 1991). Normally the Triple Test is only interpreted together with the sonographic results (Manfred Stauber, 2007).

	MSAFP	HCG	UE3
Down syndrome (DS)	↓	↑	↓
Trisomy 18	↓	↓	↓

Tab 1 Changes of the three parameters (MSAFP, HCG and UE3) in the maternal blood, predicting Down syndrome (DS) and trisomy 18.

While triple test is used as a screening tool, it requires confirmation using US and cytogenetic tests due to its high false positive results(Evers-Kiebooms, Nys, Decruyenaere, Witters, & Fryns, 2001).

3. PAPP-A and ß-HCG

Pregnancy associated protein A (PAPP-A) and free ß-HCG in combination with nuchal translucency (NT) are used for early screening to detect aneuploidy (Harethardottir, 2001), especially DS (Aitken & Crossley, 1997; Dhaifalah & Majek, 2012), as well as Trisomy 13 and Trisomy 18 (Spencer, 2007).

4. Alpha Fetoprotein in the maternal serum (AFP)

AFP belongs to a group of transport protein like albumin, vitamin D binding protein and AFM (Gorin, Cooper, Eiferman, van de Rijn, & Tilghman, 1981; Lichenstein et al., 1994; Mizejewski, 2001). The coding region of AFP is located together with AFM and albumin genes on the chromosome 4.

AFP is a glycoprotein with a molecular weight from 67,500. It is built of a single polypeptide chain of 580 aminoacids residue and 3.6% carbohydrate. It is negatively charged, and its isoelectric point it is reached at pH of 4.57. There are monomeric, dimeric and trimeric forms from AFP. The dimeric and trimeric forms are converted to monomer by disulfide-reducing agents, and therefore their formation relies on intermolecular disulfide bonds (Law & Dugaiczyk, 1981; Yachnin, Hsu, Heinrikson, & Miller, 1977). AFP has a great affinity for estrogen, and may have immunoregulatory properties (Tomasi, 1977) and strong, broad immunogenicity (Thimme et al., 2008)

AFP appears in plasma by the 4^{th} week of gestation, and reaches its maximum at the 12^{th}-16^{th} week, then goes down pre-and postnatal. Measuring of AFAFP is considered to be sensitive for open NTDs between 13 and 20 (Crandall & Chua, 1995). It is also found in high levels in the plasma of patients who have hepatocarcinogenesis, and therefore can be used as a marker of its early stages (Akuta et al., 2014).

AFP is produced in fetal liver and yellow sac of mammals (Nahon et al., 1988); it reaches the amniotic fluid through the fetal urine, i.e. via fetal kidneys, and is also able to reach the maternal blood/plasma because of the corresponding permeability of placenta. The concentration of AFP increases if the barrier between fetus and the amniotic fluid is impaired through deformities like spina bifida. Its concentration in amniotic fluid depends on the gestational age (Manfred Stauber, 2007). AFP can be measured as maternal AFP in the blood of the pregnant woman and as AFAFP, directly in the AF, speculating that diffusion and other mechanism are responsible for the transfer of AFP through the fetal membrane to maternal circulation (Hsu, Hseih, Chiu, Liou, & Soong, 1994).

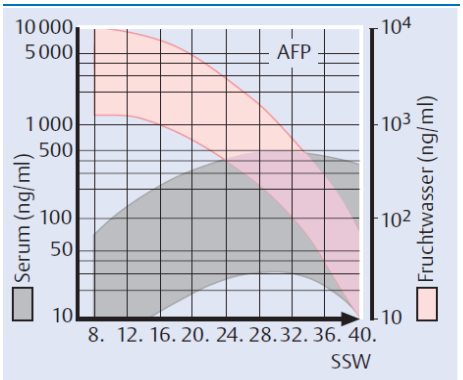

Fig. 2. shows how the concentration of AFP in the maternal serum and in amniotic fluid changes during pregnancy. While the MSAFP increases, the AFAFP decreases with ongoing pregnancy (Fig. from Stauber et al., 2005).

The best time to measure the AFAFP is between the 16 and 18 week of gestation, this time point leaves enough time to enable additional diagnostic procedures during the pregnancy If there is an association of the fetus' gender and the concentration of AFP, remains to be studied (Drugan et al., 1997; Lehavi, Aizenstein, Evans, & Yaron, 2005; Sharony et al., 2003)

5. Nuchal translucency (NT) :

It is a one of the tool to detect DS, as prospective studies in a total of 200,868 pregnancies, including 871 fetuses with trisomy 21, have showed that increased nuchal translucency can identify 76.8% of fetuses with trisomy 21 (Nicolaides, 2004).

Nuchal translucency can be measured in most pregnant women in the first and early second trimester.(Jackson & Rose, 1998). NT which is greater than or equal to 3 mm was associated with many disorders like poor pregnancy outcome, chromosomal abnormalities, congenital cardiac diseases, poor maternal and fetal health and adverse pregnancy outcomes.(Cheng, Bahado-Singh, Chen, & Tsai, 2004). A positive correlation of enhanced AFAFP and enhanced nuchal transluciency was recently proposed by (Dugoff et al., 2005).

1.4. WHEN IS AFP INCREASED?

AFP is used as a marker especially in the second trimester; not in the first trimester because of the rapid changes and complex pattern of AFP in the first trimester (Wathen, Campbell, Kitau, & Chard, 1993). It is increased in pregnancies with neural tube defects (open spina bifida, meningomyelocele, and anencephaly) (Robbin et al., 1993), abdominal wall defects (omphalocele and gastroschisis), congenital nephrosis, ataxia telangiectasia, and threatening abortion (Rose, Peters, Tomaszewski, & Mennuti, 1997). As well as in hepatic disorders, especially chronic hepatitis; and various malignancies, particularly hepatomas, teratomas, and those of primitive gut origin (Tomasi, 1977).

Increased AFP is a predictor for preterm birth, placenta complications (Waller, Lustig, Cunningham, Feuchtbaum, & Hook, 1996), open neural tube defects, i.e. when the brain or spinal cord are exposed to AF due to a defect in skull or back bone which may lead to massive enhanced rates of AFP. (Tomasi, 1977; Waller et al., 1996), and preeclampsia (Wenstrom, Owen, Davis, & Brumfield, 1996). Moreover, contamination with fetal blood may lead to false positive (Doran, Allen, Pirani, & Shumak, 1977) while decreased AFP is a predictor for trisomy 18 and Down syndrome, which may be a result of the production of an altered AFP molecule that has modified turnover or transport properties (Kronquist, Dreazen, Keener, Nicholas, & Crandall, 1990). AFP is not for other fetal trisomies (Davis et al., 1985)

OPEN NEURAL TUBE DEFECTS CAN BE:

- Anencepahaly: occurs when the rostral end of neural tube fails to close resulting in absence of big portion of the brain, skull and scalp (Greene & Copp, 2014). Most of these infants die before delivery (Obeidi, Russell, Higgins, & O'Donoghue, 2010).
- Encephaloceles: is when the brain protruded out of the skull and covered with only a membrane. (Rowland, Correa, Cragan, & Alverson, 2006). These Children are physically and intellectually disabled.(Raja, Qureshi, Memon, Ali, & Dev, 2008).
- Hydranencephaly: a great portion of the brain and corpus striatum is replaced with cerebrospinal fluid and glial tissue, although the skull is formed normal. The outlook of these children is poor, and they die mostly at the first year. (Pant, Kaur, & De, 2010).
- Spina bifida: is when some vertebrae are not fully overlying the spinal cord (Bader et al., 2004; Greene & Copp, 2014). It is the result of failure in fusion the caudal neural tube. It may be caused by many disorder like chromosome abnormalities and tertogenic exposure. Spina bifida could be prevented up to 70% by taking folic acid, which underlies unknown process. (Mitchell et al., 2004)

To distinguish false positive AFP results from true open neural tube defects, ACHE (acetyl cholinesterase) is also tested in AF. ACHE is a serine protein which hydrolyzes acetylcholine and is found at the neuromuscular junction and in the central nerve system (Quinn, 1987).

Elevated alpha-fetoprotein levels combined with positive ACHE measurements are found in virtually all cases, which makes it a highly reliable measure in detecting this lesion, i.e. neural tube defects, according to a study in 1989 (Goldfine, Haddow, Knight, & Palomaki, 1989). A recent study anyway showed that this test is not a

cost-effective approach anymore; with 6232 who underwent amniocenteses in one center in the USA, detailed US had a sensitivity of 100% in detecting NTD and ventral wall defects, whereas that of the AFAFP ranged from 22% to 77%, including ACHE measurement. Not performing the AFP test could have led to a cost saving of $3.225.972 in the year of 2011 USA wide, considering that a single AFP test costs 76$ in the USA (Flick, Krakow, Martirosian, Silverman, & Platt, 2014a)

2. PROBLEM/ QUESTION TO BE ANSWERED IN THE PRESENT WORK

In the Institute of Human Genetic Jena, two tests are used to detect fetal abnormalities, especially NTD. These are the measurement of AFP in the amniotic fluid and cytogenetics; US is done in parallel in Department of Gynecology and Obstetrics Jena or in private practices.

In this work I wanted to answer the question if US and cytogenetics can be aligned properly with the abnormal results of AFAFP. In other words, is it necessary to perform the AFP test additionally to noninvasive US- and invasive cytogenetic test? This is also of interest for the pregnant women themselves as they have to pay the AFP test on their own, while the two other tests are covered by the insurance in Germany.

3. MATERIAL AND METHODS

This work is based on data provided by the Institute for Clinical Chemistry in Jena, which were interpreted for the Institute for Human Genetic in Jena. The data was collected for the present work using patients' folder between the period of 2000 and 2012. These folders were available in the Human Genetics, and /or at the Clinic for Gynecology Jena.

The test results of amniotic fluid alpha-fetoprotein (AFAFP) of 3,119 females were collected for a period between the 11th and the 36th week of gestation (WOG). The privacy for each patient was maintained using the number of amniotic fluid of their samples instead of their names, beside some cases which had no AF number. In addition, I gave every patient an individual ID which is called "AFP-patient number".

If a patient had twins, he/she was given the same number twice. However repeated pregnancies i.e. same women how gave birth more than once at the University Hospital of Jena, could not be identified, due to data protection reasons.

Data collected for each pregnancy included: AFP-result, ACHE result (if available), week and day of gestation, the age of the mother at the time of the collected samples.

To determine if the AFP results could predict any pathological outcomes, the sonography results of patients who had MoM of AFP > 1.7 were listed to observe if US could find any malformations. There were 74 patients who had a MoM of AFP between 1.7 and 3, and 32 patients who had a MoM of AFP result higher than 3. Not all US results for those patients were available.

All MoM results were calculated by dividing each AFP result by the Median of AFP, this Median of AFP was provided from the University of Giessen (see Tab. 2 in result part). Furthermore, the MoM of AFP for each AFP result was calculated by dividing this AFP result by the median of AFP, which I calculated according to the results in the University of Jena (see Tab. 2 in result part).

As an example, we take the patient with the amniotic fluid number 91, from the year 2002 (see original data as provided with work and electronically). This patient was in the 13th WOG, the median value of all patients who were in the 13th WOG is equaled to 16.76 according to the University of Jena. By dividing the AFP result of this patient on the median value of the 13th WOG, we get 0.55, which is the MoM of AFP according to Jena University. However, According to the University of Giessen, MoM of AFP for this patient is 0.45. To compare the results of both universities, see please the table 2 in the results section.

Cytogenetic results were provided by the cytogenetic group of the Institute of Human Genetics in Jena.

4. RESULTS

4.1. MOM OF AFP ACCORDING TO THE UNIVERSITY OF JENA

This study included **3,119** cases – the original data is available on the attached CD to this work, and in the Tables section. AFP-data was collected as MOM-values; in Tab 2 the MOM is given for all studied cases and sorted by WOG.

w.o.g	Median, Uni Jena	N	Median, Uni Gießen	Difference
12	28.4	3	n.a.	n.a.
13	16.76	17	20.22	3.46
14	16.78	67	20.67	3.89
15	14.9	515	17.76	2.86
16	13.38	676	15.16	1.78
17	11.265	484	12.2	0.935
18	9.17	314	10.14	0.97
19	7.41	275	8.33	0.92
20	5.42	376	6.8	1.38
21	4.61	252	5.58	0.97
22	3.84	65	4.04	0.2
23	3	29	4.95	1.95
24	2.7	10	n.a.	n.a.
25	3.285	4	n.a.	n.a.
26	2.01	8	n.a.	n.a.
27	1.9	3	n.a.	n.a.
28	1.57	5	n.a.	n.a.
29	3.56	1	n.a.	n.a.
30	1	3	n.a.	n.a.
31	1.16	5	n.a.	n.a.
32	0.4	3	n.a.	n.a.
33	0.8	3	n.a.	n.a.
34	1.005	0	n.a.	n.a.
36	0.4	1	n.a.	n.a.

Tab. 2. Changing of MoM of AFP as WOG proceeds
It shows how the Medians of AFP change as WOG proceeds, and the difference in the results between the two universities. N = number of cases

4.2. ACHE AND THE CORRELATION TO AFP

In my dataset, Acetylcholinesterase (ACHE) was measured in 63 cases. The results were as following (see Table 3):

ACHE	Median of MoM (AFP)	N
0	1.88	50
1	2.06	9
2	4.86	2
3	8.99	2

Tab. 3. ACHE test results and the corresponding Median of MoM (AFP) in 63 cases. ACHE test was recommended if AFAFP greater than 1.7
Median of MoM of AFP was calculated to demonstrate the relationship between MoM of AFP and ACHE. All MoM of AFP results were enlisted according to their ACHE value, and then the median value of MoM of AFP of these results was calculated accordingly.

Results were classified as:

1. negative 0
2. slightly positive 1
3. positive 2
4. high positive values 3

4.3. US RESULTS FOR CASES WITH HIGH MOM OF AFP

A possible correlation of pathological US results and AFP was studied in the table 4, including only cases with a MoM > 1.7 and data from sonography:

MoM (AFP)	AFP	amniotic fluid number	AFP-patient number	US data
1.81	22.06	2003/253	980	brain-defect: encephalocele, ventriculomegaly
1.99	22.87	2001/269	313	heart defect: severe, not classified
2.62	30.1	2000/295	136	heart defect: severe, not classified -> intrauterine growth retardation

1.92	19.51	2006/156	1949	heart defect: hemophagocytic syndrome with hypoplastic ascending aorta stenosis
2.07	20.97	2007/68	2301	oligohydramnion and asymmetric growth retardation
4.32	43.82	2002/185	701	oligohydramnion and intrauterine growth retardation.
4	22.3	2007/405	2362	anhydramnion
2.62	35.4	2000/401	68	omphalocele
37.81	3.1	2011/25003	3104	omphalocele / abdominal wall defect
139.8	9.22	2010/23737	3031	omphalocele / fetal gastroschisis
181.27	10.21	2006/23	2052	omphalocele / gastroschisis
181.02	21.73	2003/192	1007	omphalocele / gastroschisis
232.6	101.13	2001/85	422	omphalocele / gastroschisis
3.43	28.6	2009/18940	2827	spina bifida / fetal myelocele
7.47	30.17	2002/110	761	spina bifida / fetal neural tube defect
17.84	148.61	2004/145	1336	complex fetal malformations: anencephalus, defect of upper cervical spine, overlapping fingers, singular artery umbilical cord
29.63	474.1	2000/428	48	complex fetal malformations
30.16	305.85	2006/123	1975	complex fetal malformations: no abdominal wall defect
2.79	27.1	2001/86	424	intrauterine fetal death
29.79	451.62	2007/287	2495	intrauterine fetal death
1.72	17.46	2002/341	929	no abnormalities
1.83	24.64	2001/259	303	
1.89	28.66	2002/404	893	
1.91	15.68	2001/282	642	
1.91	25.73	2001/115	399	
2.02	24.59	2005/240	1895	
2.05	36.42	2006/88	2002	
2.08	33.34	2001/96	412	
2.11	17.54	2007/78	2293	
2.45	13.67	2004/400	1473	
2.59	29.74	2001/239	320	
2.97	20.2	2002/31	810	

Tab. 4. US results by patients who had greater MoM of AFP than 1.7.
All US results which were found by patients who had greater MoM of AFP than 1.7 were collected in this table, to assess if US were able to detect all abnormalities in fetuses with high AFP.

US examination in the university of Jena between 2000 and 2012 were certified the grade 2 according to DEGUM (Deutsche Gesellschaft für Ultraschall in der Medizin / German Society for Ultrasound in the Medicine) and that match a high definition ultrasound quality.

4.4. CYTOGENETIC RESULTS

4.4.1. DOWN SYNDROME

Low MoM of AFP could be an indicator of many chromosomal aberrations like Down syndrome, trisomy 18 and trisomy 13. In this study I wanted to prove if there is a correlation between a low MoM of AFP and Down syndrome.

Year	amniotic fluid number	AFP-patient number	W.O.G	AFP	MoM of AFP	gender	maternal age	cytogenetic results
2000	118	n.a.	n.a.	n.a.	n.a.	F	n.a.	46,XX,der(14;21),+21
2002	203	690	26+6	2.68	1.33	F	37	47,XX,+21
2001	254	314	14	22.31	1.06	F	42	47,XX,+21
2010	22293	2903	16+3	15.00	0.99	F	37	47,XX,+21
2001	95	417	16	15.15	0.95	F	40	47,XX,+21
2010	23059	3061	17+2	10.30	0.84	F	38	47,XX,+21
2003	136	1037	16+5	12.40	0.82	F	45	47,XX,+21
2001	438	550	15+2	14.16	0.8	F	21	47,XX,+21
2002	183	707	20+3	5.22	0.77	F	25	47,XX,+21
2004	373	1494	16+3	11.10	0.73	F	26	47,XX,+21
2002	153	726	18+3	7.16	0.71	F	26	47,XX,+21
2004	44	1413	15+4	10.14	0.59	F	41	47,XX,+21
2004	81	1383	15+1	10.28	0.58	F	35	47,XX,+21
2003	119	1046	16+6	8.60	0.57	F	38	47,XX,+21
2012	0262	3279	20+2	3.78	0.56	F	33	47,XX,+21
2001	314	618	21	3.05	0.55	F	39	47,XX,+21
2010	21793	2943	16+6	8.30	0.55	F	30	47,XX,+21
2002	300	954	15+4	9.17	0.52	F	36	47,XX,+21
2000	477	47	17+2	5.50	0.48	F	n.a.	47,XX,+20
2011	25213	3086	25+3	1.57	0.48	F	40	47,XX,+21
2002	91	773	13+5	9.17	0.45	F	40	47,XX,+21
2012	1000	3198	15+5	7.67	0.43	F	37	47,XX,+21
2003	423	1175	15+1	6.92	0.39	F	32	47,XX,+21

2003	228	995	16+4	5.75	0.38	F	36	47,XX,+21
2011	25083	3095	20+3	1.90	0.28	F	28	47,XX,+21
n.a.	17550	n.a.	n.a.	n.a.	n.a.	M	n.a.	46,XY ([13]/47,XY,+21[4])
2007	333	2417	15	20.11	1.13	M	27	47,XY,+21
2009	20574	3003	18+1	8.90	0.88	M	26	47,XY,+21
2006	285	2105	21	4.79	0.86	M	32	47,XY,+21
2006	30	2048	20+2	5.71	0.84	M	23	47,XY,+21
2009	20678	2997	15	15.00	0.84	M	42	47,XY,+21
2008	16605	2592	20+6	5.60	0.82	M	18	47,XY,+21
2007	305	2439	19+1	6.68	0.8	M	32	47,XY,+21
2008	16622	2590	16+4	11.60	0.77	M	41	47,XY,+21
2006	114	1981	17+2	8.90	0.73	M	39	47,XY,+21
2006	196	2176	15+5	11.36	0.64	M	38	47,XY,+21
2005	19	1770	20+2	4.05	0.59	M	42	47,XY,+21
2008	17402	2522	19+3	4.30	0.52	M	39	47,XY,+21
2008	16851	2563	15+4	8.90	0.5	M	44	47,XY,+21
2007	335	2415	16+2	7.14	0.47	M	35	47,XY,+21
2008	16661	2585	17+2	5.70	0.47	M	40	47,XY,+21
2004	266	1581	21+1	2.47	0.44	M	24	46,XY,+21t(21;21), +21

Tab.5. MoM of AFP results in cases which had DS

MoM of AFP was low in the cases which had DS. In 38 out of 40 cases, AFP results were lower than the median. There were 25 female fetuses and 17 male fetuses that had DS, both gender had low MoM of AFP. The same applies for sonographic features in second trimester. F stands for female and M for male.

Between the 18th year and 30th year of maternal age, I found 11 cases of DS. Between the 31th year and the 42nd year, there were 28 cases, which confirm the role of maternal age on the development of DS.

4.4.2. PÄTAU SYNDROME

Another syndrome which was detected in our results was the Pätau syndrome (trisomy 13). We had 9 cases, but only could compare 6 cases with MoM of AFP.

Year	amniotic fluid number	AFP-patient number	W.O.G	AFP	MoM of AFP	maternal Age	cytogenetic results
2000	10	289	21+0	7.0	1.2	30	47,XX,+13
2008	17092	2541	21+6	5.7	1.03	20	47,XX,+13
2008	16473	2616	13+5	15.5	0.76	27	47,XX,+13
2007	185	2216	14+5	10.88	0.53	37	47,XX,+13
2007	268	2468	16	14.67	0.97	39	47,XY,+13
2002	439	875	14+3	17.3	0.84	32	47,XY,+13

Tab. 6. MoM of AFP results in cases which had Pätau syndrome

4.4.3. EDWARDS SYNDROME

Edward syndrome (trisomy 18) in our results was associated with low AFP results, which makes AFP test for this syndrome an unspecific prenatal diagnostic procedure. In one case, a gastroschisis was detected via US.

Year	amniotic fluid number	AFP-patient number	W.O.G	AFP	MoM of AFP	maternal age	US	cytogenetic results
2011	24191	3175	18+4	148.9	**14.68**	40	n.a.	47,XY,+18
2011	25003	3104	17	37.81	**3.1**	34	omphalocele / gastroschisis	47,XX,+18
2005	115	1687	21+2	4.96	0.89	36	n.a.	47,XX,+18
2001	138	384	18+5	8.51	0.88	28	n.a.	47,XX,+18
2011	25174	3090	19+4	6.62	0.79	37	n.a.	47,XX,+18
2004	387	1482	20+2	4.63	0.68	27	n.a.	47,XX,+18
2000	281	144	14+1	13.00	0.67	41	n.a.	47,XX,+18

2005	128	1675	15+4	11.58	0.65	36	n.a.	47,XX,+18
2001	494	505	19+6	11.73	**1.41**	36	n.a.	47,XY,+18
2001	508	494	15+6	17.06	0.96	34	n.a.	47,XY,+18
2006	260	2125	18+3	9.09	0.9	43	n.a.	47,XY,+18
2001	130	389	15+3	13.79	0.86	31	n.a.	47,XY,+18
2004	84	1380	17+6	6.48	0.53	34	n.a.	47,XY,+18
2001	389	580	27+1	5.63	0.00	22	n.a.	47,XY,+18

Tab. 7. MoM of AFP results in cases which had Edward syndrome.

4.4.4. NUMERICALLY ABNORMAL SEX CHROMOSOMES

Year	amniotic fluid number	AFP-patient number	W.O.G	AFP	MoM of AFP	maternal age	cytogenetic results
2000	40	274	18	10.00	**0.97**	35	45,X[5]/46,XX[29]
2007	235	2498	19+2	7.8	0.94	27	45,X/46,XN
2005	24	1766	15	17.76	0.89	21	45,X
2006	186	2184	15+6	30.27	**1.7**	32	47,XXY
2003	244	983	20+6	6.24	0.92	35	47,XXY
2001	491	508	14+6	16.65	0.81	36	47,XXY
2005	156	1651	16	11.89	0.78	37	47,XYY/46,XY
2006	229	2152	16+0	11.47	0.76	36	47,XXY,t(13;20)
2011	24710	3132	16+5	10.60	0.7	36	47,XXX[2]/46,XX[27]
2001	377	587	16+1	10.28	0.68	36	47,XYY

Tab 8 MoM of AFP results in cases which had numerically abnormal sex chromosomes.

From this table we realize that numerically abnormal sex chromosomes are companied with normal MoM of AFP. However, 7 out of 10 women were 35 years old or older. This demonstrates the effect of the maternal age on these abnormalities, which is believed to be a result from meiotic nondisjunction, the same as for DS. (Fridovich).

4.4.5. TRIPLOIDY

Year	amniotic fluid number	AFP-patient number	W.O.G	AFP	MoM of AFP	maternal age	cytogenetic results
2002	185	701	18+5	43.82	**4.32**	26	69,XXY
2004	332	1527	16+1	19.04	1.26	37	69,XXY
2009	21077	2969	13+3	81.9	**4.05**	29	69,XXY
2012	712	3227	14+2	17.82	0.86	40	69,XXY
2004	388	1481	15+5	25.3	**1.42**	38	69,XXX
2009	20514	3010	16+6	7.4	0.49	31	69,XXX

Tab 9 MoM of AFP results in cases which had triploidy.

One can see that there is no correlation between triploidy and MoM of AFP, which varied between 0.49 and 4.32. MoM of AFP in these cases is not able to detect triploidy. However, an increased nuchal translucenc (NT), could, along with low maternal serum free beta-hCG and PAPP-A with a combination of trisomy 21 risk, refer to triploidy (Spencer, Liao, Skentou, Cicero, & Nicolaides, 2000).

4.4.6. BALANCED CHROMOSOMAL ABERRATIONS

Year	amniotic fluid number	AFP-patient number	W.O.G	AFP	MoM of AFP	maternal age	cytogenetic results
2005	125	1678	19+2	12.99	1.56	33	46,XN,t(2;16)
2000	396	70	21+1	8	1.36		47,XX,+min(8)(:p11->q11:)
2002	338	931	20+6	8.82	1.3	32	46,XY,t(6;11)
2004	248	1595	16+0	19.46	1.28	38	47,XY,+inv dup(22)(q11.1)
2012	2163	3212	16+2	18.59	1.23	38	46,XY – Noonan syndrome proven (Mol. Gen.)
2004	399	1474	17	14.58	1.2	28	46,XY,t(3;18)
2007	368	2388	16+2	15.8	1.04	32	46,XN,t(8;14)
2001	424	558	22+2	3.66	0.91	34	46,XY,t(9;13)

2005	58	1735	19	7.27	0.87	39	45,XX,der(13;14)
2002	426	882	15+1	14.86	0.84	34	45,XX,der(13;14)
2008	16674	2582	20+3	5.5	0.81	37	45,XX,der(13;14)
2008	17015	2552	18+1	7.5	0.74	32	46,XX,t(18;22)
2010	22643	2879	23	3.2	0.64	42	45,XX,t(13,14)(q10;q10)
2011	24408	3161	17+1	7	0.57	43	46,XY,t(2;17)(p23~22;p10)
2003	493	1127	17+5	6.89	0.56	36	47,XY,+i(13or21)(q10)
2003	363	1216	15+5	9.63	0.54	30	45,XX,der(14;21)
2009	19821	2775	15+1	7.5	0.42	40	46,XX,t(9;22)

Tab 10 MoM of AFP results in cases which had balanced chromosomal aberrations..

AFP could not detect balanced chromosomal aberrations either, MoM of AFP varied in these cases between 0.42 and 1.56, which is not considered to be specific.

4.4.7. UNBALANCED CHROMOSOMAL ABERRATIONS

The same as for unbalanced chromosomal aberrations which showed a variation in MoM of AFP between 1.23 and 0.49 expect a case which had a 6.87. These unbalanced chromosomal aberration included Noonan syndrome and Di George syndrome.

Year	amniotic fluid number	AFP-patient number	W.O.G	AFP	MoM of AFP	maternal age	cytogenetic results
2009	20740	2992	17+2	83.3	6.87	28	46,XY,der(4)t(2;4)(p16.2;q34)
2012	2163	3212	16+2	18.59	1.23	38	46,XY – Noonan syndrome proven (Mol. Gen.)
2001	322	615	16+1	15.26	1.01	23	46,XX,der(13)
2010	22017	2928	21+6	5.2	0.94	30	Di George syndrome – del(22)(q11.2q11.2)
2011	24597	3142	21+4	4.9	0.88	39	mos 47,XX,+inv dup(22)(q11.21)[1]/46,XX[25]
2005	241	1894	15	15.36	0.86	40	47,XX,+22

2007	52	2313	17	9.73	0.8	20	der(1) (massive gain of chr. 1 material)
2011	25072	3094	14+4	14.04	0.68	24	46,XX,der(13)t(13;?)(q21;?) or del(13)(q22)
2001	459	533	17+1	6.55	0.54	20	Wolf-Hirschhorn syndrome del(4)(p16.3p16.3)
2009	19588	2791	19+2	4.1	0.49	25	47,XY,+5[15]/46,XY[2]

Tab 11 MoM of AFP results in cases which had unbalanced chromosomal aberrations.

5. DISCUSSION

Many studies were involved in this work to find out, if it is necessary to perform the AFP test, in spite of the fact that US and cytogenetics are carried out as routine tests during pregnancy. As well, if AFP test has the same importance as US in detecting birth abnormalities, especially NTD was here primarily studied.

Other abnormalities which studied here were:

1. Neural Tube Defect (NTD), including: encephalocele, omphalocele, gastroschisis and spina bifida;
2. Down syndrome (DS);
3. Pätau syndrome;
4. Edwards syndrome;
5. numerically abnormal sex chromosomes;
6. triploidy;
7. balanced chromosomal aberrations; and
8. unbalanced chromosomal aberrations.

5.1. ACQUISITION OF DATA

Data was acquired retrospectively on **3,284** cases in which MoM of AFP was determined; these cases were taken from the Human Genetics Institute in Jena between 2000 and 2012

ACHE concentrations were determined if MoM of AFP was higher than 1.7, however, ACHE was not measured in all such cases, sometime because of abortion, sometime because it was considered to be useless after that one confirmed abnormality via US, or the test was rejected from physician. Overall, AFP-data was available in cases with aberrant clinical and/or cytogenetic data.

Clinical data was available only in **41** cases, **22** thereof were abnormal.

ACHE test was performed in **62** cases.

Cytogenetic data could be assessed in **105** cases, which included:

- 42 cases which had DS
- 6 cases which had Pätau syndrome
- 14 cases which had Edward syndrome
- 10 cases which had numerically abnormal sex chromosomes

- 6 cases which had triploidy
- 17 cases with balanced chromosomal aberration
- 10 which had unbalanced chromosomal aberration

Unlike other studies, this study was not able to compare all AFP data with their US results. Nevertheless, it was possible to calculate new MoM of AFP according to **3,119** cases which were found at the Institute of Human Genetic in Jena. The new MoM of AFP includes all WOG between 11 and 36, besides the 35th due to the lack of data in this week.

Comparing the results from Giessen, our results did not show a big discrepancy. This difference was higher at the early weeks of gestation.

5.2. AFP IN CONNECTION TO ASSESSED PARAMETERS

Major interest was AFP and its meaningfulness as predictor for clinical outcome and cytogenetic result. Besides, other parameters were studied as outlined below.

5.2.1. Twin pregnancies and AFP

As according to the literature, twin pregnancies deliver other data than monozygote pregnancies. Therefore, those data were analyzed separately. This opinion is based on a study that showed in 1988 that in 3 diamnionic-monochorionic twins' pregnancies, which had fetal anomalies associated with an elevated AFAFP and ACHE level, healthy twin member had significantly elevated amniotic fluid alpha-fetoprotein and ACHE levels, which suggested diffusion of alpha-fetoprotein and ACHE through the amnion-amnion interface between the gestational sacs (Drugan et al., 1989; Stiller et al., 1988).

In our study, we found 25 pairs of twins, all of them had normal results of MoM of AFP, except for a case in which the first fetus had 3.43 MoM of AFP, and his twin 0.81 MoM of AFP. Thus we can not conclude that twin pregnancies provide similar data as monocygote ones in most cases, even though, as outlined by Stiller et al. (1988) abnormal values may appear, especially if there are any neural tube defects or hints on an undetected co-twin in sonography (Chitayat et al.,1991).

Moreover, AFAFP levels are different in female and male twin fetuses, whereas it is higher in the male twins in comparison to female twins (Sharony et al., 2003)

5.2.2. AFP and sonographic abnormalities

High MSAFP and AFAFP are indication to carry out high resolution sonography (Vintzileos et al., 1999). Nowadays, because that the first trimester screening includes sonography as a routine test which is done in parallel to AFP test, sonographic abnormalities are detected in most cases before the AFP-test result is ready

(Gremm et al., 1997),. Thus it was already suggested to replace the AFP by sonography completely (Mandruzzato et al., 2002) (Kooper et al., 2007)

This replacement cannot be done without proving that all abnormalities are detectable via US. In order to do this, I have studied all US results which was induced through high results of AFP. **41** US results could be tracked down, among them **22** with abnormal findings.

US seems to have the main role in detecting NTD. In a study which was performed in Sweden, data from 1,813 AFAFP test were analyzed, the MoM of AFP in eight cases was equaled to or more than 3. Five of them were false positive (about 63%) in the other 3 cases, NTD was detected. Other study in Sweden during 2004 showed that 91% of the obstetric clinics performed routine assessment of AFAFP at second-trimester, but only 9% found that this analysis useful in clinical practice.
According to this, routine measurement of amniotic fluid alpha-Fetoprotein in early second-trimester, to rule out a risk of open fetal neural tube defects, does not seem justified, and the clinical usefulness seems to be limited (Widlund & Gottvall, 2007). In this study, US was able to detect all NTDs.

The ability of AFP to detect abnormalities in pregnancy seems to be variable; as for **gastroschisis**, I found **6** cases in which US confirmed a gastroschisis. In these cases MoM of AFP was between 3.1 and 101.13. US has detected gastroschisis in all these cases.

US is not only able to detect NTD, but also to determine if this NTD open or closed, which has a different prognoses (Ghi et al., 2006; Leguy et al., 2011); (Dashe, Twickler, Santos-Ramos, McIntire, & Ramus, 2006). The provided US results available from the Institute of Obstetrics and Gynecology in Jena were not detailed enough to differentiate between open and closed NTD, therefore I was not able to confirm this ability in this work.

A similar study was carried out in the USA to test efficiency of AFP; hereby 2,769 AFP results were studied between 1995 and 1998. 82 of them (3%) were elevated, but only one of them was partially discriminatory. US could however detect other 61 cases alone, Thus, an elevated alpha-fetoprotein result added diagnostic precision in only 1 (0.036%) of 2,769 cases. Cost estimates suggested that routine amniotic fluid alpha-fetoprotein assessment resulted in $219,000 expenditure per informative case (Silver, Leeth, & Check, 2001).

In the University of Jena it was recommended to carry out US if the result of MoM of AFP was higher than 1.7. When it was higher than 3, a special attention was paid. From the 41 cases which had clinical data:

- There were 26 cases which had a smaller MoM of AFP than 3. From these cases, only 3 cases were abnormal acc. to US.
- 14 cases had a higher MoM of AFP than 3. From these cases 12 of them had abnormalities acc. to US.

These results do not demonstrate AFP test as an effective reliable tool, as US had to be done to confirm its results.

5.2.3. AFP and Cytogenetics

Cytogenetic results were deployed in this study, to see if AFP test is able to detect cytogenetic aberrations. Cytogenetic aberrations which were studied in this work were:

Down syndrome: In this study we found that low MoM of AFP results are associated with Down syndrome. In 37 from 40 cases which had the trisomy 21, MoM of AFP were between 0.28 and 0.99, which were considered to be 92% from all cases, and to be lower than the median (Crandall et al., 1988). The other 3 DS cases had 1.06, 1.13 and 1.33 MoM of AFP.

According to the table 5, I did not find any differences between the 2 genders in MoM of AFP in detecting DS. Both genders showed the same low MoM of AFP, beside 2 results in females and 1 result in males. However, betaHCG could be 16% higher for females than for male fetuses in DS screening (Larsen et al., 2002), which is not part of this work.

As for Edwards- and Pätau-syndrome, the most of the AFP results were lower than the median. In the table 7, 14 cases of **Edwards** syndrome was studied. 12 of them had an AFP lower than the median; the other 2 cases **(14%)** were too high, reaching 14.68 and 3.1.

Concerning **Pätau** syndrome, 4 of 6 cases were lower than the median **(67%).** MoM of AFP swayed between 1.2 and 0.53. According to these results, we cannot consider MoM of AFP a specific parameter to detect Pätau syndrome. In a study which aimed to determine this relationship, 28 cases of Trisomy 13 were identified which had median of AFP of 1.35, therefore AFP test was not considered to be useful (Saller et al., 1999)

Cases with **triploidy** showed more results, which were higher than the median, namely 4 out 6 **(66%)**. Cases with **balanced chromosomal aberrations** showed 7 cases out 17 which were higher than the median **(41%)**. Cases with **unbalanced chromosomal aberration** had 3 cases out 10 higher than the median **(30%).**

Accordingly, AFP test could **not** present a stabile base to discriminate other cytogenetic abnormalities other than DS, together with the other parameter of triple test. Nowadays, the triple test is still used as a routine antenatal screening tool for DS. (Reynolds, 2010).

5.2.4. AFP and ACHE as a NTD marker

In this study, ACHE was measured when MoM of AFP was higher than 1.7. In some cases, this measurement was not done because US had already detected a NTD, or because physicians did not approve the test. In **63** cases in this study ACHE was measured. In all cases, ACHE was high as MoM of AFP was high, apart from 2 cases; in the first one MoM of AFP was equaled to 3.1, and ACHE was negative. In this case, US has shown an omphalocele. In the other case, AFP was equaled to 1.11 and ACHE was negative, a mylomeningocele was found via US.

According to this, I do not find ACHE a reliable marker to detect NTD. Measuring ACHE did not give any new information, and even when it was high, a US examination was necessary to proof this high result.

A similar study was performed in Seattle; in this study ACHE was positive in 37 cases, and US results were abnormal in these cases. Moreover, none of the fetuses with negative findings on sonographic screening had detectable abnormalities at birth. In this study with over 7,000 patients, amniotic fluid alpha-fetoprotein and ACHE levels did not increase the detection of fetal abnormalities. On the basis of these results, routine measurement of amniotic fluid alpha-fetoprotein level at the time of routine genetic amniocentesis (15 to 22 weeks) does not appear to be justified (Shields, Uhrich, Komarniski, Wener, & Winter, 1996), and could not be considered useful to detect pregnancy complications either (Verspyck et al., 1999).

Another study which analyzed retrospectively 6,232 cases between 2002 and 2012 showed that 81 women from them had an elevated AF-AFP, but only 13 had NTD and 5 had ventral wall defect. On the other hand, detailed US had in this study a sensitivity of 100%, detecting all cases with such abnormalities, whereas that of the AF-AFP ranged from 22% to 77%, which does not make AFAFP a cost-effective approach (Flick, Krakow, Martirosian, Silverman, & Platt, 2014b).

CONCLUSION

To identify birth abnormalities in an early stage, especially NTD, many tests were applied. The importance of these tests has varied through the last decades, which can be explained by the continuous improvement of US, and its ability of the early discover of NTD during pregnancy. US as a non-invasive method, is used along with AFP and ACHE tests and has always confirmed their pathological results.

As for this study, US was always able to detect the abnormalities which were predicted via AFP and ACHE tests. Moreover, US gave more information about these abnormalities than AFP and ACHE.

On the other hand, AFP and ACHE were not reliable. High results were not always associated with abnormal outcomes, neither were low results always a detector of cytogenetic abnormalities. ACHE did not show any additional advantages. High results of both tests were always followed with US, which was the deciding examination.

Therefore I came to the conclusion that there is no necessity to carry on with AFP test and ACHE tests, because they did not give any diagnosing advantages. Furthermore, they may be accompanied with side effects as invasive approaches which are not present by US. This opinion was supported as well by Mandruzzato et al., who suggested replacing the AFP by sonography completely (Kooper et al., 2007; Mandruzzato et al., 2002).

Concerning the situation in Germany, it is not necessary to let the pregnant women to pay the AFP test, as sonography with cytogenetics are fully informative. Moreover,nonivasive tests are prefferd over invasive tests, to avoid the risk of procedure-related pregnancy los (Pettit, Hull, Korty, Jones, & Pretorius, 2014)

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7. TABLES

year	Amniotic Fluid	patient number	W.O.G	AFP	MoM of AFP, Giessen	maternal age	MoM of AFP, Jena	Median
2001	289	638	11+3	127.98		33	1.85	69.12
2007	107	2274	11+3	69.12		23	1.00	69.12
2008	16952	2551	11+2	12.3		34	0.18	69.12

Tab 12 MoM of AFP in the 11th W.O.G

year	Amniotic Fluid	patient number	W.O.G	AFP	MoM of AFP, Giessen	maternal age	MoM of AFP, Jena	Median
2007	140	2252	12+2	29.5	1.46	23	1.04	28.4
2008	16568	2601	12+4	28.4		27	1.00	28.4
2009	20050	2761	12+2	16.3		40	0.57	28.4

Tab 13 MoM of AFP in the 12th W.O.G

year	Amniotic Fluid	patient number	W.O.G	AFP	MoM of AFP, Giessen	maternal age	MoM of AFP, Jena	Median
2000	484	16	13+6	22.4	1.05		1.34	16.76
2000	65	264	13	10	0.43	32	0.60	16.76
2002	91	773	13+5	9.17	0.45	40	0.55	16.76
2002	62	798	13+6	17.22	0.85	24	1.03	16.76
2005	143	1662	13+4	16.71	0.83	35	1.00	16.76
2006	172	1937	13+1	16.76	0.83	32	1.00	16.76
2006	153	1951	13+3	21.66	1.07	28	1.29	16.76
2006	233	2149	13+6	13.85	0.68	35	0.83	16.76
2007	97	2280	13+1	37.96	1.88	29	2.26	16.76
2007	85	2288	13+5	13.99	0.69	21	0.83	16.76
2007	64	2304	13+1	13.98	0.69	28	0.83	16.76
2007	389	2370	13+3	14.1	0.7	35	0.84	16.76
2008	16473	2616	13+5	15.5	0.76	27	0.92	16.76
2008	17785	2709	13+5	28	1.38	30	1.67	16.76
2010	21886	2936	13+1	25.7	1.27	25	1.53	16.76
2010	21443	2957	13+1	388.8	19.23	33	23.20	16.76
2009	21077	2969	13+3	81.9	4.05	29	4.89	16.76

Tab 14 MoM of AFP in the 13th W.O.G

year	Amniotic Fluid	patient number	W.O.G	AFP	MoM of AFP,	maternal age	MoM of AFP, Jena	Median

					Giessen			
2000	501	9	14+3	15.3	0.73		0.91	16.78
2000	420	54	14+1	12.9	0.62		0.77	16.78
2000	370	86	14+2	21.1			1.26	16.78
2000	302	111	14+0	25.3	1.29		1.51	16.78
2000	330	115	14+1	12.4	0.64		0.74	16.78
2000	312	120	14+2	16.5	0.85		0.98	16.78
2000	281	144	14+1	13	0.67	41	0.77	16.78
2000	173	210	14+1	20.1	1.01	43	1.20	16.78
2000	109	245	14+3	13.4	0.96	32	0.80	16.78
2000	91	255	14+4	18.6	0.96	40	1.11	16.78
2000	44	276	14+2	17.1	0.88	36	1.02	16.78
2001	254	314	14	22.31	1.07	42	1.33	16.78
2001	152	378	14+5	13.93	0.67	36	0.83	16.78
2001	128	391	14+1	18.11	0.87	30	1.08	16.78
2001	521	481	14+3	31.87	1.54	34	1.90	16.78
2001	495	504	14+4	19.5	0.94	30	1.16	16.78
2001	491	508	14+6	16.65	0.81	36	0.99	16.78
2001	326	612	14+4	16.18	0.78	37	0.96	16.78
2002	221	676	14+2	22.32	1.08	23	1.33	16.78
2002	75	788	14+3	22.4	1.08	38	1.33	16.78
2002	36	808	14+5	21.35	1.03	42	1.27	16.78
2002	439	875	14+3	17.3	0.84	32	1.03	16.78
2003	229	996	14+3	15.46	0.75	24	0.92	16.78
2003	156	1026	14+5	17.89	0.87	37	1.07	16.78
2003	115	1050	14	21.18	1.02	39	1.26	16.78
2003	62	1068	14+6	25.62	1.24	39	1.53	16.78
2003	427	1172	14+4	10.61	0.51	34	0.63	16.78
2003	378	1204	14+6	13.32	0.64	39	0.79	16.78
2003	335	1234	14+4	15.51	0.75	26	0.92	16.78
2003	317	1245	14+5	15.38	0.74	40	0.92	16.78
2003	306	1252	14+3	11.7	0.57	38	0.70	16.78
2003	298	1258	14+1	16.84	0.81	35	1.00	16.78
2004	171	1314	14+1	17.49	0.85	26	1.04	16.78
2004	54	1404	14+6	14.23	0.69	38	0.85	16.78
2004	6	1447	14	14.78	0.72	35	0.88	16.78
2004	340	1521	14+6	16.21	0.78	37	0.97	16.78
2004	295	1559	14+5	17.92	0.87	31	1.07	16.78
2004	229	1611	14+6	22.87	1.11	24	1.36	16.78
2005	182	1627	14+5	15.38	0.74	39	0.92	16.78
2005	135	1668	14+5	11.51	0.56	41	0.69	16.78
2005	57	1736	14+6	15.51	0.75	33	0.92	16.78
2005	27	1763	14+3	16.78	0.81	35	1.00	16.78
2005	17	1772	14+4	13.65	0.66	38	0.81	16.78
2005	280	1857	14+4	16.43	0.79	35	0.98	16.78
2005	205	1925	14+6	15.67	0.76	36	0.93	16.78
2006	226	2155	14+3	29.66	1.43	24	1.77	16.78
2007	205	2200	14+2	3.23	0.16	36	0.19	16.78
2007	185	2216	14+5	10.88	0.53	37	0.65	16.78
2007	162	2233	14+3	18.67	0.9	20	1.11	16.78

2007	115	2271	14+3	22.71	1.1	37	1.35	16.78
2007	70	2299	14+2	20.84	1.01	40	1.24	16.78
2007	60	2306	14+5	16.51	0.8	35	0.98	16.78
2007	26	2336	14+1	13.14	0.64	37	0.78	16.78
2007	372	2385	14+5	13.9	0.67	26	0.83	16.78
2007	371	2386	14+3	18.4	0.89	38	1.10	16.78
2007	234	2499	14+3	23.81	1.15	37	1.42	16.78
2007	233	2500	14+6	14.96	0.72	38	0.89	16.78
2008	18086	2681	14	21.9	1.06	30	1.31	16.78
2008	17594	2724	14+3	22.7	1.1	38	1.35	16.78
2009	20314	2738	14+6	21	1.01	38	1.25	16.78
2009	19904	2771	14+6	13.1	0.64	28	0.78	16.78
2010	22069	2915	14+3	21.2	1.02	26	1.26	16.78
2010	21842	2941	14	25.4	1.22	30	1.51	16.78
2011	25072	3094	14+4	14.04	0.68	24	0.84	16.78
2012	712	3227	14+2	17.82	0.86	40	1.06	16.78
2012	510	3243	14+5	17.09	0.83	40	1.02	16.78
2012	453	3253	14+5	16.58	0.8	28	0.99	16.78

Tab 15 MoM of AFP in the 14th W.O.G

year	Amniotic Fluid	patient number	W.O.G	AFP	MoM of AFP, Giessen	maternal age	MoM of AFP, Jena	Median
2000	511	2	15+5	18.9	1.18		1.27	14.9
2000	497	11	15+6	17.3	1.08	38	1.16	14.9
2000	511	25	15+5	18.9	1.18		1.27	14.9
2000	458	29	15+2	24.5	1.53		1.64	14.9
2000	453	32	15+3	19.4	1.21	34	1.30	14.9
2000	446	33	15+1	15.5	0.97		1.04	14.9
2000	478	46	15+5	18.8	1.17	39	1.26	14.9
2000	418	57	15+0	21.9	1.37		1.47	14.9
2000	393	75	15+1	16	1		1.07	14.9
2000	371	97	15+6	13	0.81		0.87	14.9
2000	366	108	15+4	24.1	1.51	37	1.62	14.9
2000	360	109	15+6	15.9	0.99		1.07	14.9
2000	319	121	15+1	20.4	1.24		1.37	14.9
2000	306	124	15	21.1	1.09	40	1.42	14.9
2000	294	132	15+0	19.2	1.16		1.29	14.9
2000	296	134	15+1	19.9	1.21	34	1.34	14.9
2000	299	138	15+5	19.2	1.16	35	1.29	14.9
2000	283	142	15+3	15.6	0.95		1.05	14.9
2000	262	154	15+3	9.5	0.58	31	0.64	14.9
2000	261	155	15+3	6.3	0.38	29	0.42	14.9
2000	241	161	15+5	13.2	0.82	22	0.89	14.9
2000	227	169	15+4	11.5	0.7	29	0.77	14.9
2000	216	171	15+4	12.1	0.73	33	0.81	14.9
2000	225	172	15	18.6	1.13	22	1.25	14.9
2000	219	184	15+5	17.4	1.05	39	1.17	14.9

2000	218	185	15+5	13.8	0.84	38	0.93	14.9
2000	197	187	15+5	13.3	0.81	36	0.89	14.9
2000	164	205	15+1	28.1	1.7	37	1.89	14.9
2000	174	208	15+1	13.5	0.82	37	0.91	14.9
2000	147	218	15	19.9	1.03	35	1.34	14.9
2000	141	219	15+3	14.1	0.85	43	0.95	14.9
2000	146	220	15	17.6	0.91	35	1.18	14.9
2000	153	224	15+4	15.1	0.92	27	1.01	14.9
2000	139	226	15+1	17.8	1.08	34	1.19	14.9
2000	120	231	15+1	14.7	0.89	36	0.99	14.9
2000	130	240	15+4	15.4	0.93	21	1.03	14.9
2000	103	251	15	11.2	0.68	34	0.75	14.9
2000	77	257	15	20.2	1.04	21	1.36	14.9
2000	64	261	15+1	15.1	0.92	33	1.01	14.9
2000	68	263	15+5	20.9	1.27	40	1.40	14.9
2000	60	268	15+5	17	1.03	35	1.14	14.9
2001	257	311	15+3	23.84	1.49	39	1.60	14.9
2001	252	315	15	28.41	1.78	39	1.91	14.9
2001	235	324	15+5	23.07	1.44	24	1.55	14.9
2001	229	332	15+5	9.49	0.59	36	0.64	14.9
2001	223	336	15+5	22.49	1.41	37	1.51	14.9
2001	209	342	15+6	25.21	1.58	32	1.69	14.9
2001	199	343	15+2	11.18	0.7	35	0.75	14.9
2001	191	350	15+1	23.41	1.46	33	1.57	14.9
2001	180	360	15+2	14.05	0.88	35	0.94	14.9
2001	173	363	15+5	17.95	1.12	34	1.20	14.9
2001	171	364	15	18.6	0.89	23	1.25	14.9
2001	167	366	15+6	19.37	1.21	37	1.30	14.9
2001	157	372	15	30.53	1.96	36	2.05	14.9
2001	130	389	15+3	13.79	0.86	31	0.93	14.9
2001	131	389	15+3	15.31	0.96	31	1.03	14.9
2001	127	395	15+1	25.09	1.57	28	1.68	14.9
2001	103	411	15+3	14.11	0.88	31	0.95	14.9
2001	96	412	15+6	33.34	2.08	30	2.24	14.9
2001	101	416	15	24.88	1.49	35	1.67	14.9
2001	47	451	15+4	13.67	0.85	26	0.92	14.9
2001	531	483	15+2	19.09	1.07	29	1.28	14.9
2001	526	484	15+1	6.7	0.38	33	0.45	14.9
2001	508	494	15+6	17.06	0.96	34	1.14	14.9
2001	504	495	15+5	12.49	0.7	25	0.84	14.9
2001	498	503	15+3	14.36	0.81	36	0.96	14.9
2001	490	509	15+5	15.07	0.85	36	1.01	14.9
2001	489	509	15+6	12.27	0.69	36	0.82	14.9
2001	488	509	15+7	13.8	0.78	36	0.93	14.9
2001	485	512	15+4	16.02	0.9	35	1.08	14.9
2001	473	526	15+6	12.75	0.72	31	0.86	14.9
2001	466	529	15+4	13.49	0.76	30	0.91	14.9
2001	468	530	15+6	9.79	0.55	28	0.66	14.9
2001	456	535	15+3	13.69	0.77	34	0.92	14.9
2001	437	549	15+1	30.12	1.7	27	2.02	14.9

2001	438	550	15+2	14.16	0.8	21	0.95	14.9
2001	436	551	15+5	14.32	0.81	32	0.96	14.9
2001	434	554	15+4	11.06	0.62	34	0.74	14.9
2001	412	567	15+2	12	0.68	23	0.81	14.9
2001	406	570	15+0	17.76	1	32	1.19	14.9
2001	393	579	15+0	22.23	1.25	37	1.49	14.9
2001	378	585	15+2	16.08	0.91	27	1.08	14.9
2001	365	595	15+1	6.01	0.34	33	0.40	14.9
2001	351	601	15	11.25	0.63	45	0.76	14.9
2001	352	603	15+2	17.53	0.99	35	1.18	14.9
2001	328	611	15+5	17.79	1	39	1.19	14.9
2001	327	613	15+3	19.74	1.11	38	1.32	14.9
2001	274	647	15+3	14.23	0.89	36	0.96	14.9
2002	267	649	15+5	14.85	0.84	39	1.00	14.9
2002	240	667	15+4	15.97	0.9	37	1.07	14.9
2002	219	678	15	18.47	0.89	19	1.24	14.9
2002	207	687	15+6	14.89	0.84	40	1.00	14.9
2002	204	689	15+3	18.42	1.04	42	1.24	14.9
2002	202	691	15+4	16.72	0.94	37	1.12	14.9
2002	201	692	15+2	12.17	0.69	40	0.82	14.9
2002	190	697	15+5	15.13	0.85	37	1.02	14.9
2002	180	704	15+5	17.93	1.01	33	1.20	14.9
2002	171	711	15+5	17.33	0.98	40	1.16	14.9
2002	175	712	15+2	14.79	0.83	39	0.99	14.9
2002	168	715	15+1	17.2	0.97	37	1.15	14.9
2002	152	727	15	11.43	0.64	28	0.77	14.9
2002	134	739	15+6	14.26	0.8	37	0.96	14.9
2002	125	748	15+6	9.68	0.54	37	0.65	14.9
2002	116	755	15+6	14.28	0.8	30	0.96	14.9
2002	107	765	15+6	14.42	0.81	26	0.97	14.9
2002	93	772	15+5	24.34	1.37	27	1.63	14.9
2002	92	774	15+4	21.06	1.19	35	1.41	14.9
2002	84	776	15	23.17	1.3	20	1.56	14.9
2002	72	790	15+5	15.15	0.85	40	1.02	14.9
2002	67	795	15+2	15.45	0.87	36	1.04	14.9
2002	46	804	15+4	10.29	0.58	27	0.69	14.9
2002	3	814	15+4	14.09	0.79	31	0.95	14.9
2002	21	826	15+1	21.27	1.2	21	1.43	14.9
2002	506	830	15+5	10.6	0.6	24	0.71	14.9
2002	504	833	15+5	22.11	1.24	26	1.48	14.9
2002	488	846	15+5	26.02	1.46	28	1.75	14.9
2002	481	850	15+5	13.79	0.78	37	0.93	14.9
2002	447	871	15+5	19.47	1.1	38	1.31	14.9
2002	443	873	15+1	13.21	0.74	40	0.89	14.9
2002	426	882	15+1	14.86	0.84	34	1.00	14.9
2002	414	887	15+3	9.56	0.54	27	0.64	14.9
2002	387	901	15+3	20.56	1.16	41	1.38	14.9
2002	383	907	15+5	23.44	1.32	38	1.57	14.9
2002	356	921	15+6	15.99	0.9	36	1.07	14.9
2002	354	922	15+1	20.87	1.18	37	1.40	14.9

2002	340	928	15+2	17.95	1.01	33	1.20	14.9
2002	336	934	15+3	16.06	0.9	37	1.08	14.9
2002	311	948	15+5	16.81	0.95	35	1.13	14.9
2002	309	950	15+6	20.92	1.18	37	1.40	14.9
2002	308	952	15+4	21.79	1.23	37	1.46	14.9
2002	301	953	15+6	14.6	0.82	23	0.98	14.9
2002	300	954	15+4	9.17	0.52	36	0.62	14.9
2002	297	959	15+5	17.99	1.01	27	1.21	14.9
2002	299	960	15+5	12.12	0.68	39	0.81	14.9
2002	289	966	15+6	14.14	0.8	37	0.95	14.9
2002	273	976	15+3	13.66	0.77	36	0.92	14.9
2002	271	977	15+6	14.81	0.83	37	0.99	14.9
2003	255	979	15+1	9.86	0.56	38	0.66	14.9
2003	246	984	15+5	15.1	0.85	41	1.01	14.9
2003	242	985	15+5	11.79	0.66	44	0.79	14.9
2003	239	987	15	14.01	0.79	37	0.94	14.9
2003	235	989	15+1	11.59	0.65	33	0.78	14.9
2003	236	990	15+6	8.29	0.47	40	0.56	14.9
2003	233	991	15+6	18.52	1.04	39	1.24	14.9
2003	223	998	15+4	12.06	0.68	41	0.81	14.9
2003	224	999	15+6	10.93	0.62	25	0.73	14.9
2003	194	1005	15+2	16.92	0.95	40	1.14	14.9
2003	138	1014	15+2	12.08	0.68	37	0.81	14.9
2003	151	1025	15+2	16.76	0.94	38	1.12	14.9
2003	160	1027	15+1	15.06	0.85	28	1.01	14.9
2003	166	1029	15+3	8.24	0.46	29	0.55	14.9
2003	178	1035	15+5	35.65	2.01	31	2.39	14.9
2003	134	1039	15+5	13.59	0.76	36	0.91	14.9
2003	123	1047	15+5	13.63	0.77	36	0.91	14.9
2003	124	1047	15+5	22.27	1.25	36	1.49	14.9
2003	71	1073	15+4	12.08	0.68	36	0.81	14.9
2003	90	1081	15+3	7.67	0.43	42	0.51	14.9
2003	93	1085	15+6	14.86	0.84	35	1.00	14.9
2003	94	1086	15+3	10.53	0.59	31	0.71	14.9
2003	35	1093	15+5	20.96	1.18	38	1.41	14.9
2003	18	1104	15+6	11.7	0.66	39	0.79	14.9
2003	7	1109	15+4	24.94	1.4	39	1.67	14.9
2003	503	1120	15	20.05	0.97	15	1.35	14.9
2003	499	1124	15+2	11.94	0.67	37	0.80	14.9
2003	490	1130	15+2	4.76	0.27	31	0.32	14.9
2003	482	1135	15+6	19.4	1.09	39	1.30	14.9
2003	466	1145	15	15.42	0.87	39	1.03	14.9
2003	460	1151	15+4	14.97	0.84	40	1.00	14.9
2003	455	1154	15	14.15	0.8	40	0.95	14.9
2003	453	1156	15+6	18.04	1.02	35	1.21	14.9
2003	447	1158	15+4	14.29	0.8	39	0.96	14.9
2003	440	1161	15+1	16.49	0.93	36	1.11	14.9
2003	429	1170	15+6	11.83	0.67	36	0.79	14.9
2003	426	1173	15+3	9.86	0.56	37	0.66	14.9
2003	423	1175	15+1	6.92	0.39	32	0.46	14.9

2003	420	1177	15+1	12.15	0.68	27	0.82	14.9
2003	409	1185	15+6	10.99	0.62	38	0.74	14.9
2003	388	1195	15+6	11.19	0.63	35	0.75	14.9
2003	380	1202	15+4	9.17	0.52	22	0.62	14.9
2003	379	1203	15+4	7.85	0.44	29	0.53	14.9
2003	376	1206	15+4	13.71	0.77	39	0.92	14.9
2003	363	1216	15+5	9.63	0.54	30	0.65	14.9
2003	361	1217	15+1	15.02	0.85	37	1.01	14.9
2003	356	1221	15+2	15.19	0.86	36	1.02	14.9
2003	350	1224	15+6	9.74	0.55	31	0.65	14.9
2003	343	1229	15+4	16.13	0.91	35	1.08	14.9
2003	326	1237	15+2	12.28	0.69	42	0.82	14.9
2003	323	1240	15+1	15.35	0.86	34	1.03	14.9
2003	319	1244	15+2	14.93	0.84	37	1.00	14.9
2003	313	1247	15+4	11.42	0.64	38	0.77	14.9
2003	309	1249	15+5	8.1	0.46	35	0.54	14.9
2003	301	1255	15+2	13.7	0.77	36	0.92	14.9
2003	290	1266	15+2	12.89	0.73	36	0.87	14.9
2003	278	1271	15+4	9.38	0.53	36	0.63	14.9
2003	272	1273	15+1	12.81	0.72	37	0.86	14.9
2003	269	1274	15	21.03	1.18	40	1.41	14.9
2003	265	1275	15+3	12.12	0.68	40	0.81	14.9
2004	219	1277	15+5	15.64	0.88	40	1.05	14.9
2004	216	1280	15	10.69	0.6	35	0.72	14.9
2004	214	1282	15+6	17.05	0.96	38	1.14	14.9
2004	212	1284	15+4	12.52	0.71	39	0.84	14.9
2004	211	1285	15+5	17.83	1	42	1.20	14.9
2004	210	1286	15+2	11.46	0.65	37	0.77	14.9
2004	198	1294	15+1	13.41	0.75	35	0.90	14.9
2004	194	1297	15+3	11.08	0.62	26	0.74	14.9
2004	190	1300	15	39.79	2.24	39	2.67	14.9
2004	170	1315	15+2	19.19	1.08	29	1.29	14.9
2004	169	1316	15+2	14.61	0.82	38	0.98	14.9
2004	163	1320	15+4	13.46	0.76	27	0.90	14.9
2004	162	1321	15+6	20.42	1.15	36	1.37	14.9
2004	157	1325	15+4	11.96	0.67	34	0.80	14.9
2004	156	1326	15+4	20.55		36	1.38	14.9
2004	152	1329	15+6	19.65	1.11	38	1.32	14.9
2004	133	1344	15+3	9.13	0.51	38	0.61	14.9
2004	130	1347	15+2	12.56	0.71	36	0.84	14.9
2004	118	1355	15+5	13.9	0.78	42	0.93	14.9
2004	113	1360	15+4	13.38	0.75	41	0.90	14.9
2004	108	1362	15+2	14.85	0.84	42	1.00	14.9
2004	93	1374	15+4	12.45	0.7	37	0.84	14.9
2004	87	1377	15+6	15.55	0.88	39	1.04	14.9
2004	85	1379	15+3	6.94	0.39	38	0.47	14.9
2004	81	1383	15+1	10.28	0.58	35	0.69	14.9
2004	80	1384	15+6	13.83	0.78	36	0.93	14.9
2004	77	1385	15+5	13.73	0.77	35	0.92	14.9
2004	75	1387	15	17.49	0.99	37	1.17	14.9

2004	70	1391	15+4	11.24	0.63	37	0.75	14.9
2004	68	1393	15+3	13.82	0.78	37	0.93	14.9
2004	67	1394	15+4	17.3	0.97	38	1.16	14.9
2004	65	1396	15+5	18.82	1.06	36	1.26	14.9
2004	50	1408	15+6	8.32	0.47	38	0.56	14.9
2004	44	1413	15+4	10.14	0.59	41	0.68	14.9
2004	41	1416	15	20.56	1.16	38	1.38	14.9
2004	39	1418	15+4	15.4	0.87	37	1.03	14.9
2004	38	1419	15+6	15.3	0.86	31	1.03	14.9
2004	35	1422	15+3	20.18	1.14	29	1.35	14.9
2004	33	1424	15+5	15.86	0.89	38	1.06	14.9
2004	28	1429	15+3	12.28	0.69	41	0.82	14.9
2004	23	1434	15+6	10.57	0.6	37	0.71	14.9
2004	22	1435	15+5	13.92	0.78	37	0.93	14.9
2004	20	1436	15	11.77	0.66	35	0.79	14.9
2004	15	1441	15+5	14.96	0.84	39	1.00	14.9
2004	11	1443	15+2	12.16	0.68	27	0.82	14.9
2004	423	1454	15+5	16.9	0.95	34	1.13	14.9
2004	416	1459	15+6	13.68	0.77	29	0.92	14.9
2004	415	1460	15+2	14.76	0.83	38	0.99	14.9
2004	397	1475	15+3	14.16	0.8	35	0.95	14.9
2004	392	1479	15+3	18.81	1.06	37	1.26	14.9
2004	388	1481	15+5	25.3	1.42	38	1.70	14.9
2004	384	1484	15+4	14.55	0.82	38	0.98	14.9
2004	383	1485	15+5	14.02	0.79	38	0.94	14.9
2004	397	1488	15+5	14.88	0.84	33	1.00	14.9
2004	377	1490	15+2	12.76	0.72	36	0.86	14.9
2004	359	1503	15+4	11.68	0.66	30	0.78	14.9
2004	356	1506	15+3	11.8	0.66	35	0.79	14.9
2004	350	1511	15+2	20.21	1.14	37	1.36	14.9
2004	345	1516	15+3	15.34	0.86	33	1.03	14.9
2004	339	1522	15+1	20.23	1.14	39	1.36	14.9
2004	333	1526	15+5	15.72	0.88	38	1.06	14.9
2004	331	1528	15	15.04	0.85	29	1.01	14.9
2004	330	1529	15+0	14.43	0.81	41	0.97	14.9
2004	329	1530	15+2	13.54	0.76	30	0.91	14.9
2004	325	1534	15+3	13.89	0.78	38	0.93	14.9
2004	321	1538	15+6	15.29	0.86	38	1.03	14.9
2004	317	1542	15+5	12.14	0.68	37	0.81	14.9
2004	315	1544	15+4	12.42	0.7	35	0.83	14.9
2004	314	1545	15+6	21.57	1.21	26	1.45	14.9
2004	313	1546	15	12.72	0.72	34	0.85	14.9
2004	307	1550	15+6	11.67	0.66	31	0.78	14.9
2004	305	1552	15+5	14.72	0.83	35	0.99	14.9
2004	300	1554	15+1	17.77	1	40	1.19	14.9
2004	298	1556	15+5	12.12	0.68	34	0.81	14.9
2004	297	1556	15+5	15.37	0.87	34	1.03	14.9
2004	296	1558	15+0	14.52	0.82	35	0.97	14.9
2004	292	1562	15+3	13.39	0.75	40	0.90	14.9
2004	281	1565	15+3	10.74	0.6	25	0.72	14.9

2004	285	1568	15+6	9.06	0.51	38	0.61	14.9
2004	288	1569	15+1	11.73	0.66	30	0.79	14.9
2004	280	1570	15+5	10.01	0.56	35	0.67	14.9
2004	271	1577	15+5	15.17	0.85	36	1.02	14.9
2004	262	1585	15+6	12.05	0.68	32	0.81	14.9
2004	260	1586	15+2	12.5	0.7	43	0.84	14.9
2004	245	1597	15+4	20.78	1.17	19	1.39	14.9
2004	232	1608	15+6	15.84	0.89	42	1.06	14.9
2004	231	1609	15+6	17.9	1.01	42	1.20	14.9
2004	221	1616	15+5	15.71	0.88	31	1.05	14.9
2005	187	1622	15+1	17.49	0.98	28	1.17	14.9
2005	178	1631	15+6	21.12	1.19	33	1.42	14.9
2005	166	1642	15+2	11.65	0.66	39	0.78	14.9
2005	159	1649	15	8.88	0.5	36	0.60	14.9
2005	146	1660	15+6	11.59	0.65	41	0.78	14.9
2005	128	1675	15+4	11.58	0.65	36	0.78	14.9
2005	109	1692	15+4	15.8	0.89	34	1.06	14.9
2005	105	1696	15+3	20.71	1.17	37	1.39	14.9
2005	95	1705	15+6	9.1	0.52	26	0.61	14.9
2005	93	1706	15+3	13.65	0.77	37	0.92	14.9
2005	92	1707	15+2	14.28	0.8	28	0.96	14.9
2005	88	1711	15+2	21.39	1.2	20	1.44	14.9
2005	73	1721	15+6	15.15	0.85	23	1.02	14.9
2005	69	1725	15+6	11.07	0.62	37	0.74	14.9
2005	61	1733	15+4	9.23	0.52	30	0.62	14.9
2005	54	1738	15	23.66	1.33	35	1.59	14.9
2005	50	1741	15+4	24.1	1.36	23	1.62	14.9
2005	49	1742	15+4	16.54	0.93	31	1.11	14.9
2005	37	1753	15+2	22.86	1.29	28	1.53	14.9
2005	28	1762	15+4	13.37	0.75	36	0.90	14.9
2005	24	1766	15	17.76	0.89	21	1.19	14.9
2005	21	1768	15+6	19.64	1.11	31	1.32	14.9
2005	14	1775	15+5	13.8	0.78	40	0.93	14.9
2005	5	1782	15+1	14.06	0.79	39	0.94	14.9
2005	2	1785	15+4	12.74	0.72	39	0.86	14.9
2005	359	1793	15+4	10.69	0.6	38	0.72	14.9
2005	357	1795	15+4	9.55	0.54	35	0.64	14.9
2005	346	1803	15	15.39	0.87	38	1.03	14.9
2005	342	1807	15	16.04	0.9	35	1.08	14.9
2005	337	1811	15+6	11.84	0.67	38	0.79	14.9
2005	327	1816	15+6	16.98	0.96	40	1.14	14.9
2005	317	1824	15+4	17.62	0.99	38	1.18	14.9
2005	311	1829	15+4	18.41	1.04	36	1.24	14.9
2005	297	1842	15+3	20.29	1.14	27	1.36	14.9
2005	290	1847	15+3	24.88	1.4	21	1.67	14.9
2005	276	1861	15+2	18.94	1.07	40	1.27	14.9
2005	266	1871	15+6	27.73	1.56	20	1.86	14.9
2005	265	1872	15	9.36	0.53	34	0.63	14.9
2005	264	1873	15	12.31	0.69	34	0.83	14.9
2005	265	1873	15	9.36	0.53	34	0.63	14.9

2005	255	1882	15+4	15.43	0.87	38	1.04	14.9
2005	241	1894	15	15.36	0.86	40	1.03	14.9
2005	237	1898	15+5	19.66	1.11	35	1.32	14.9
2005	236	1899	15+6	16.64	0.94	42	1.12	14.9
2005	229	1905	15+6	12.24	0.69	38	0.82	14.9
2005	226	1908	15+5	12.33	0.69	41	0.83	14.9
2005	179	1931	15+3	11.38	0.64	38	0.76	14.9
2005	195	1932	15+6	13.53	0.76	41	0.91	14.9
2006	173	1935	15+5	25.37	1.43	35	1.70	14.9
2006	169	1938	15+6	15.28	0.86	40	1.03	14.9
2006	157	1947	15+4	19.34	1.09	37	1.30	14.9
2006	155	1948	15+6	21.97	1.24	27	1.47	14.9
2006	154	1950	15+5	10.43	0.59	41	0.70	14.9
2006	150	1954	15+4	14.15	0.8	40	0.95	14.9
2006	145	1957	15+1	15.44	0.87	35	1.04	14.9
2006	135	1963	15+1	14.63	0.82	28	0.98	14.9
2006	132	1966	15+6	11.43	0.66	35	0.77	14.9
2006	93	1997	15+2	12.2	0.69	41	0.82	14.9
2006	88	2002	15+4	36.42	2.05	28	2.44	14.9
2006	83	2008	15+2	16.78	0.94	37	1.13	14.9
2006	73	2015	15+2	12.83	0.72	40	0.86	14.9
2006	70	2018	15+5	11.83	0.67	35	0.79	14.9
2006	67	2021	15+4	20.55	1.16	39	1.38	14.9
2006	54	2029	15	18.32	1.03	35	1.23	14.9
2006	48	2035	15+6	11.86	0.67	28	0.80	14.9
2006	27	2050	15+5	20.23	1.14	37	1.36	14.9
2006	26	2051	15+4	283.53	15.96	25	19.03	14.9
2006	23	2052	15	181.27	10.21	28	12.17	14.9
2006	21	2054	15+6	12.9	0.73	35	0.87	14.9
2006	7	2064	15+6	21.37	1.2	33	1.43	14.9
2006	3	2069	15+5	11.82	0.67	38	0.79	14.9
2006	322	2075	15+1	14.42	0.81	29	0.97	14.9
2006	313	2084	15+6	15.29	0.86	36	1.03	14.9
2006	303	2092	15+1	22.57	1.27	36	1.51	14.9
2006	300	2095	15+6	12.38	0.7	35	0.83	14.9
2006	289	2101	15	9.13	0.51	25	0.61	14.9
2006	286	2104	15+3	15.22	0.86	38	1.02	14.9
2006	280	2109	15+6	11.73	0.66	37	0.79	14.9
2006	265	2120	15+4	20.28	1.14	37	1.36	14.9
2006	264	2121	15+4	21.24	1.2	37	1.43	14.9
2006	254	2131	15+1	14.58	0.82	42	0.98	14.9
2006	248	2136	15+4	16.7	0.94	33	1.12	14.9
2006	247	2137	15+1	19.57	1.1	34	1.31	14.9
2006	246	2138	15+6	9.36	0.53	35	0.63	14.9
2006	217	2160	15+1	8.25	0.46	39	0.55	14.9
2006	212	2164	15+6	13.78	0.78	24	0.92	14.9
2006	196	2176	15+5	11.36	0.64	38	0.76	14.9
2006	194	2178	15+4	12.27	0.69	36	0.82	14.9
2006	189	2183	15+5	1.22	0.07	37	0.08	14.9
2006	186	2184	15+6	30.27	1.7	32	2.03	14.9

2006	178	2192	15+5	23.35	1.31	38	1.57	14.9
2007	213	2194	15+5	23.1	1.3	37	1.55	14.9
2007	210	2197	15+5	13.87	0.78	36	0.93	14.9
2007	198	2206	15+2	17.2	0.97	21	1.15	14.9
2007	195	2209	15+1	16.55	0.93	36	1.11	14.9
2007	194	2210	15	20.03	1.13	38	1.34	14.9
2007	179	2221	15	16.25	0.92	29	1.09	14.9
2007	173	2226	15+5	12.27	0.69	41	0.82	14.9
2007	169	2227	15+6	17.09	0.96	38	1.15	14.9
2007	159	2235	15+6	14.76	0.83	42	0.99	14.9
2007	152	2241	15	17.07	0.96	39	1.15	14.9
2007	134	2258	15+5	13.25	0.75	25	0.89	14.9
2007	132	2260	15+2	19.68	1.11	26	1.32	14.9
2007	128	2263	15+4	11.6	0.65	38	0.78	14.9
2007	95	2281	15	15.09	0.85	28	1.01	14.9
2007	69	2300	15	23.67	1.33	33	1.59	14.9
2007	56	2310	15+4	16.4	0.92	38	1.10	14.9
2007	48	2317	15	11.24	0.63	36	0.75	14.9
2007	43	2321	15	14.6	0.82	36	0.98	14.9
2007	40	2324	15+3	10.83	0.61	33	0.73	14.9
2007	30	2332	15	15.48	0.87	33	1.04	14.9
2007	24	2338	15+6	12.78	0.72	41	0.86	14.9
2007	18	2343	15+6	20.53	1.16	28	1.38	14.9
2007	17	2344	15+2	11.68	0.66	33	0.78	14.9
2007	9	2350	15+4	15.35	0.86	36	1.03	14.9
2007	8	2351	15+2	12.94	0.73	39	0.87	14.9
2007	383	2377	15+5	12.2	0.68	34	0.82	14.9
2007	375	2383	15+6	17.3	0.97	38	1.16	14.9
2007	367	2389	15+3	23.5	1.32	35	1.58	14.9
2007	363	2393	15+3	12.3	0.69	39	0.83	14.9
2007	357	2397	15+3	18.6	1.05	31	1.25	14.9
2007	356	2398	15+6	16.66	0.94	36	1.12	14.9
2007	352	2402	15	12.59	0.71	26	0.84	14.9
2007	344	2407	15+1	16.77	0.94	35	1.13	14.9
2007	343	2408	15+4	14.72	0.83	38	0.99	14.9
2007	333	2417	15	20.11	1.13	27	1.35	14.9
2007	309	2435	15+4	31.15	1.75	36	2.09	14.9
2007	295	2448	15+2	21	1.18	38	1.41	14.9
2007	285	2456	15+5	32.1	1.81	39	2.15	14.9
2007	265	2470	15+1	18.69	1.05	36	1.25	14.9
2007	264	2471	15+4	14.15	0.8	40	0.95	14.9
2007	249	2484	15+2	22.3	1.26	38	1.50	14.9
2007	245	2488	15+2	11.08	0.62	39	0.74	14.9
2007	214	2518	15+6	22.85	1.29	40	1.53	14.9
2008	17007	2549	15+2	13	0.73	36	0.87	14.9
2008	16946	2555	15+1	16.8	0.95	40	1.13	14.9
2008	16941	2556	15+2	17.5	0.99	37	1.17	14.9
2008	16930	2557	15+3	21	1.18	39	1.41	14.9
2008	16914	2558	15+4	15.1	0.85	42	1.01	14.9
2008	16857	2562	15+5	13.6	0.76	40	0.91	14.9

2008	16851	2563	15+4	8.9	0.5	44	0.60	14.9
2008	16743	2574	15+3	14.9	0.84	40	1.00	14.9
2008	16639	2587	15+3	18.4	1.04	42	1.23	14.9
2008	16631	2589	15+6	20.4	1.15	27	1.37	14.9
2008	16600	2593	15+5	17.6	0.99	37	1.18	14.9
2008	16574	2595	15+5	18.1	1.02	33	1.21	14.9
2008	16589	2596	15	17.4	0.98	26	1.17	14.9
2008	16540	2599	15+3	16.1	0.91	37	1.08	14.9
2008	16531	2606	15+3	10.4	0.59	36	0.70	14.9
2008	16504	2607	15	20.3	1.14	26	1.36	14.9
2008	16500	2608	15+1	15.2	0.85	33	1.02	14.9
2008	16412	2618	15	12.8	0.72	38	0.86	14.9
2008	16382	2620	15+5	21	1.18	37	1.41	14.9
2008	16314	2629	15+2	13.5	0.76	30	0.91	14.9
2008	16289	2637	15+5	13	0.73	36	0.87	14.9
2008	8	2642	15+5	13.5	0.76	30	0.91	14.9
2008	18543	2647	15+5	19.8	1.11	38	1.33	14.9
2008	18248	2665	15+5	13.6	0.77	35	0.91	14.9
2008	18117	2678	15+5	16.1	0.91	38	1.08	14.9
2008	18055	2684	15+4	16.2	0.91	25	1.09	14.9
2008	17991	2688	15	27	1.52	40	1.81	14.9
2008	17915	2693	15	20.4	1.15	35	1.37	14.9
2008	17883	2694	15+1	11.3	0.64	36	0.76	14.9
2008	17882	2694	15+1	12.3	0.69	36	0.83	14.9
2008	17872	2696	15+3	10.9	0.62	41	0.73	14.9
2008	17823	2702	15+5	12.8	0.72	27	0.86	14.9
2008	17777	2713	15+5	11.5	0.65	26	0.77	14.9
2008	17671	2720	15	15.9	0.89	29	1.07	14.9
2008	17584	2726	15+5	11.6	0.65	36	0.78	14.9
2008	17397	2732	15+4	21.5	1.21	26	1.44	14.9
2009	20341	2737	15+6	16.7	0.94	33	1.12	14.9
2009	20024	2764	15+3	10.4	0.58	31	0.70	14.9
2009	19953	2767	15+5	14.9	0.84	36	1.00	14.9
2009	19821	2775	15+1	7.5	0.42	40	0.50	14.9
2009	19572	2787	15+4	15.2	0.86	40	1.02	14.9
2009	19551	2794	15+4	12.8	0.72	37	0.86	14.9
2009	19552	2795	15+5	13.2	0.75	43	0.89	14.9
2009	19403	2807	15+3	18.6	1.05	27	1.25	14.9
2009	19398	2809	15	15.6	0.88	35	1.05	14.9
2009	19380	2810	15	18.8	1.06	33	1.26	14.9
2009	19160	2818	15	13	0.73	33	0.87	14.9
2009	19011	2825	15+4	18.9	1.06	38	1.27	14.9
2009	18901	2833	15+3	14.9	0.84	38	1.00	14.9
2009	18887	2834	15+2	11.4	0.64	40	0.77	14.9
2009	18868	2835	15+5	13.1	0.74	30	0.88	14.9
2009	18848	2836	15+6	16.1	0.9	35	1.08	14.9
2009	18826	2840	15+5	19.1	1.07	30	1.28	14.9
2009	18742	2848	15+1	16.1	0.91	22	1.08	14.9
2009	18720	2849	15	12.3	0.69	45	0.83	14.9
2009	18643	2856	15+4	18.1	1.02	39	1.21	14.9

2009	18607	2862	15	13.8	0.78	30	0.93	14.9
2010	22746	2873	15+4	14.1	0.79	36	0.95	14.9
2010	22664	2877	15+6	29.8	1.68	40	2.00	14.9
2010	22570	2885	15+6	20.1	1.13	24	1.35	14.9
2010	22500	2890	15+5	14	0.79	41	0.94	14.9
2010	22277	2908	15+3	17.1	0.96	39	1.15	14.9
2010	22279	2908	15+3	14.5	0.82	39	0.97	14.9
2010	22127	2920	15+1	14.9	0.84	37	1.00	14.9
2010	21920	2932	15	18.6	1.04	28	1.25	14.9
2010		2955	15+5	14.3	0.81	36	0.96	14.9
2009	20780	2985	15+4	17.1	0.96	35	1.15	14.9
2009	20678	2997	15	15	0.84	42	1.01	14.9
2010	23787	3026	15+4	13.8	0.78	27	0.93	14.9
2010	23480	3039	15+6	14.6	0.82	38	0.98	14.9
2010	23448	3042	15+5	14.8	0.84	35	0.99	14.9
2010	23453	3045	15+4	25.7	1.45	31	1.72	14.9
2010	23399	3047	15+1	21.3	1.2	37	1.43	14.9
2010	23320	3051	15	18.6	1.05	29	1.25	14.9
2010	23105	3055	15+1	25.8	1.45	34	1.73	14.9
2010	22990	3067	15+5	18.9	1.07	38	1.27	14.9
2010	22879	3073	15+2	14	0.79	42	0.94	14.9
2011	25212	3085	15+1	7.95	0.43	34	0.53	14.9
2011	25008	3103	15+5	17.75	1	23	1.19	14.9
2011	24763	3126	15+6	13.7	0.77	40	0.92	14.9
2011		3143	15+5	20.6	1.16	31	1.38	14.9
2011	24494	3148	15+1	24.9	1.4	32	1.67	14.9
2011	24365	3163	15+6	10.71	0.6	26	0.72	14.9
2011	24275	3166	15+5	12.84	0.72	31	0.86	14.9
2012	1000	3198	15+5	7.67	0.43	37	0.51	14.9
2012	681	3216	15+3	9.65	0.54	36	0.65	14.9
2012	j12-0720	3228	15+6	13.71	0.77	31	0.92	14.9
2012	700	3229	15+6	14.28	0.8	36	0.96	14.9
2012	513	3241	15+3	14.64	0.83	38	0.98	14.9
2012	515	3242	15+2	14.19	0.8	36	0.95	14.9
2012	J02-4127	3245	15	16.46	0.93	34	1.10	14.9
2012	445	3255	15+5	13.75	0.77	35	0.92	14.9
2012	1806	3260	15+5	12.2	0.8	32	0.82	14.9
2012	262	3267	15+1	9.77	0.55	36	0.66	14.9
2012	J11-0928	3269	15+3	25.79	1.45	36	1.73	14.9
2012	0260	3280	15+5	14.38	0.81	37	0.97	14.9

Tab 16 MoM of AFP in the 15th W.O.G

year	Amniotic Fluid	patient number	W.O.G	AFP	MoM of AFP, Giessen	maternal age	MoM of AFP, Jena	Median
2000	509	3	16+1	16.7	1.24		1.25	13.38

2000	479	5	16	26.5	1.66	40	1.98	13.38
2000	500	6	16+1	14.7	1.09		1.10	13.38
2000	499	7	16+2	7.2	0.53	34	0.54	13.38
2000	506	8	16+1	13.7	1.01		1.02	13.38
2000	482	17	16+2	10.2	0.76	39	0.76	13.38
2000	432	40	16+0	23.4	1.73		1.75	13.38
2000	464	44	16+3	18.3	1.35		1.37	13.38
2000	429	59	16+1	17.2	1.28		1.29	13.38
2000	410	62	16	17.5	1.09	35	1.31	13.38
2000	401	68	16	35.4	2.62		2.65	13.38
2000	405	69	16+6	11	0.82		0.82	13.38
2000	374	83	16	11.8	0.74		0.88	13.38
2000	384	84	16+4	12.2	0.91	35	0.91	13.38
2000	345	87	16+3	20.9	1.49		1.56	13.38
2000	333	89	16+2	13	0.93		0.97	13.38
2000	334	90	16+3	24.8	1.77		1.85	13.38
2000	339	93	16+5	15.8	1.14		1.18	13.38
2000	378	96	16+3	13.2	0.98		0.99	13.38
2000	353	100	16+3	12.1	0.9	46	0.90	13.38
2000	362	101	16+1	19.5	1.4	36	1.46	13.38
2000	361	102	16+0	16.5	1.2	36	1.23	13.38
2000	356	104	16+6	11	0.82	34	0.82	13.38
2000	321	116	16	14.3	0.87		1.07	13.38
2000	313	119	16+6	11.6	0.83		0.87	13.38
2000	291	128	16+3	14.5	1.04		1.08	13.38
2000	280	140	16	14	0.85	36	1.05	13.38
2000	269	147	16+2	11.3	0.81	20	0.84	13.38
2000	271	152	16	13.7	0.83	35	1.02	13.38
2000	228	168	16+2	14.6	1.04	26	1.09	13.38
2000	229	170	16	15	0.91	36	1.12	13.38
2000	210	178	16+5	12.6	0.9	36	0.94	13.38
2000	206	179	16	22.4	1.6	36	1.67	13.38
2000	207	182	16+4	12.6	0.9	35	0.94	13.38
2000	204	188	16+2	8.5	0.61	27	0.64	13.38
2000	201	191	16+3	13.5	0.96	34	1.01	13.38
2000	191	195	16+3	15.5	1.11	34	1.16	13.38
2000	175	209	16+3	11.1	0.79	35	0.83	13.38
2000	171	211	16	12.6	0.9	35	0.94	13.38
2000	152	225	16+4	16	1.14	35	1.20	13.38
2000	114	230	16+3	15.7	1.12	33	1.17	13.38
2000	131	238	16	17.1	1.22	39	1.28	13.38
2000	106	244	16	10.9	0.78	42	0.81	13.38
2000	104	246	16+6	11.1	0.79	25	0.83	13.38
2000	110	248	16+4	15.9	1.14	37	1.19	13.38
2000	107	249	16+2	10.9	0.78	22	0.81	13.38
2000	70	262	16+0	12.7	0.91	40	0.95	13.38
2000	47	278	16+5	12.6	0.9	31	0.94	13.38
2000	32	282	16+3	14	1	30	1.05	13.38
2000	8	293	16+2	14.7	1.05	36	1.10	13.38
2000	7	295	16+2	13.1	0.94	39	0.98	13.38

2001	268	302	16+1	28.57	2.12	34	2.14	13.38
2001	259	303	16	24.64	1.83	34	1.84	13.38
2001	256	310	16+1	19.38	1.44	37	1.45	13.38
2001	237	322	16+2	15.26	1.13	24	1.14	13.38
2001	238	323	16+5	12.6	0.93	38	0.94	13.38
2001	202	328	16+5	18.62	1.38	23	1.39	13.38
2001	224	334	16+4	18.95	1.4	36	1.42	13.38
2001	225	335	16+5	16.9	1.25	26	1.26	13.38
2001	200	344	16+5	12.76	0.95	21	0.95	13.38
2001	201	345	16+2	14.99	1.11	36	1.12	13.38
2001	190	351	16+3	20.73	1.54	38	1.55	13.38
2001	184	356	16+2	16.13	1.2	27	1.21	13.38
2001	185	358	16+1	31.97	2.37	40	2.39	13.38
2001	159	374	16	17.36	1.29	39	1.30	13.38
2001	155	375	16+5	10.52	0.78	38	0.79	13.38
2001	146	380	16	16	15.63	29	1.20	13.38
2001	136	386	16+4	10.77	0.8	37	0.80	13.38
2001	115	399	16+1	25.73	1.91	38	1.92	13.38
2001	94	408	16	12.18	0.76	27	0.91	13.38
2001	107	410	16+1	15.23	1.13	37	1.14	13.38
2001	104	414	16+2	16.23	1.2	37	1.21	13.38
2001	95	417	16	15.15	0.95	40	1.13	13.38
2001	98	419	16+4	13.06	0.97	39	0.98	13.38
2001	92	421	16+4	19.81	1.47	33	1.48	13.38
2001	79	429	16+6	22.3	1.39	28	1.67	13.38
2001	77	430	16+2	16.11	1.19	35	1.20	13.38
2001	72	431	16	19.92	1.24	35	1.49	13.38
2001	64	440	16	13.58	1.01	27	1.01	13.38
2001	59	445	16+6	16.57	1.23	37	1.24	13.38
2001	58	446	16+1	18.43	1.37	31	1.38	13.38
2001	37	447	16+5	13.15	0.97	38	0.98	13.38
2001	54	449	16+5	13.1	0.97	36	0.98	13.38
2001	49	452	16+1	15.09	1.12	38	1.13	13.38
2001	39	457	16+1	17.03	1.26	38	1.27	13.38
2001	23	470	16	22.68	1.42	21	1.70	13.38
2001	519	479	16+5	14.79	0.98	28	1.11	13.38
2001	524	486	16+0	9.81	0.65	33	0.73	13.38
2001	528	490	16+4	12.38	0.82	35	0.93	13.38
2001	517	492	16+2	11.08	0.73	37	0.83	13.38
2001	515	493	16	18.67	1.23	25	1.40	13.38
2001	512	496	16+2	15.62	1.03	30	1.17	13.38
2001	497	502	16	13.32	0.88	38	1.00	13.38
2001	484	514	16+0	21.2	1.4	36	1.58	13.38
2001	471	523	16+4	9.69	0.64	26	0.72	13.38
2001	458	534	16	23.57	1.56	36	1.76	13.38
2001	453	537	16	11.39	0.75	39	0.85	13.38
2001	445	544	16+3	42.21	2.78	38	3.15	13.38
2001	430	557	16+3	16.97	1.12	36	1.27	13.38
2001	422	561	16+3	6.72	0.44	31	0.50	13.38
2001	415	565	16	19.08	1.26	38	1.43	13.38

2001	404	572	16	14.47	0.96	32	1.08	13.38
2001	398	575	16+2	9.6	0.63	24	0.72	13.38
2001	396	577	16+1	16.54	1.09	33	1.24	13.38
2001	376	586	16+5	10.78	0.71	40	0.81	13.38
2001	377	587	16+1	10.28	0.68	36	0.77	13.38
2001	370	589	16+3	13.36	0.88	39	1.00	13.38
2001	371	590	16	11.56	0.76	28	0.86	13.38
2001	349	602	16+4	10.32	0.68	36	0.77	13.38
2001	319	614	16+4	13.01	0.86	38	0.97	13.38
2001	322	615	16+1	15.26	1.01	23	1.14	13.38
2001	318	617	16+5	18.81	1.24	32	1.41	13.38
2001	316	620	16+3	19.79	1.31	36	1.48	13.38
2001	297	629	16+2	12	0.73	39	0.90	13.38
2001	299	630	16+1	16.54	1.22	35	1.24	13.38
2002	266	650	16+2	17.8	1.17	32	1.33	13.38
2002	258	652	16	21.86	1.44	35	1.63	13.38
2002	252	659	16+2	18.35	1.21	20	1.37	13.38
2002	249	660	16	14.95	0.99	35	1.12	13.38
2002	214	681	16+1	12.91	0.85	25	0.96	13.38
2002	216	682	16+5	14.68	0.97	41	1.10	13.38
2002	215	685	16+1	23.76	1.57	40	1.78	13.38
2002	178	708	16+1	10.58	0.7	34	0.79	13.38
2002	172	710	16+2	14.86	0.98	38	1.11	13.38
2002	167	716	16+4	7.64	0.5	37	0.57	13.38
2002	166	718	16+2	8.5	0.56	31	0.64	13.38
2002	162	724	16	19.17	1.26	28	1.43	13.38
2002	150	725	16+6	6.92	0.46	33	0.52	13.38
2002	140	736	16+4	16.14	1.06	37	1.21	13.38
2002	130	742	16+4	11.13	0.73	40	0.83	13.38
2002	129	743	16+5	10.61	0.7	36	0.79	13.38
2002	127	746	16	15.39	1.01	24	1.15	13.38
2002	98	768	16+6	17.24	1.14	39	1.29	13.38
2002	101	770	16+1	15.82	1.04	31	1.18	13.38
2002	79	778	16+6	12.45	0.82	37	0.93	13.38
2002	78	783	16+6	12.85	0.85	35	0.96	13.38
2002	68	792	16+1	16.35	1.08	38	1.22	13.38
2002	65	796	16+5	15.5	1.02	33	1.16	13.38
2002	61	797	16+4	10.97	0.72	39	0.82	13.38
2002	63	799	16+4	22.2	1.46	39	1.66	13.38
2002	47	801	16	16.21	1.07	36	1.21	13.38
2002	30	811	16	12.09	0.8	34	0.90	13.38
2002	13	819	16	12.71	0.84	36	0.95	13.38
2002	12	820	16+6	13.13	0.87	36	0.98	13.38
2002	18	824	16+2	11.53	0.76	38	0.86	13.38
2002	22	825	16+5	10.45	0.69	22	0.78	13.38
2002	23	828	16+5	12.81	0.84	34	0.96	13.38
2002	503	834	16	14.26	0.96	35	1.07	13.38
2002	502	835	16+6	10.49	0.69	27	0.78	13.38
2002	500	836	16	12.82	0.85	35	0.96	13.38
2002	482	849	16+5	12.12	0.8	36	0.91	13.38

2002	478	854	16	15.43	0.87	36	1.15	13.38
2002	471	859	16+4	6.48	0.43	21	0.48	13.38
2002	468	861	16+3	14.14	0.93	34	1.06	13.38
2002	454	866	16+3	16.76	1.11	35	1.25	13.38
2002	441	876	16+5	8.99	0.59	30	0.67	13.38
2002	433	880	16+1	8.4	0.55	35	0.63	13.38
2002	431	881	16+5	12.83	0.85	36	0.96	13.38
2002	422	883	16	19.91	1.31	36	1.49	13.38
2002	417	888	16+6	16.54	1.09	31	1.24	13.38
2002	404	893	16+5	28.66	1.89	39	2.14	13.38
2002	407	895	16+5	18.19	1.2	28	1.36	13.38
2002	380	910	16	13.82	0.91	22	1.03	13.38
2002	362	916	16	11.73	0.77	39	0.88	13.38
2002	353	919	16	11.54	0.76	32	0.86	13.38
2002	351	923	16+1	16.31	1.08	39	1.22	13.38
2002	349	924	16+2	14.65	0.97	35	1.09	13.38
2002	329	936	16+3	11.8	0.78	27	0.88	13.38
2002	313	947	16+1	19.8	1.31	36	1.48	13.38
2002	307	956	16+4	16.16	1.07	40	1.21	13.38
2002	281	969	16+4	13.75	0.91	31	1.03	13.38
2002	277	973	16+3	19.91	1.31	37	1.49	13.38
2003	257	978	16+0	10.91	0.72	18	0.82	13.38
2003	248	982	16+3	13.44	0.89	36	1.00	13.38
2003	222	994	16+1	14.59	0.96	38	1.09	13.38
2003	228	995	16+4	5.75	0.38	36	0.43	13.38
2003	221	1000	16+1	12	0.79	39	0.90	13.38
2003	195	1006	16+5	5.56	0.37	37	0.42	13.38
2003	189	1008	16	32.89	2.17	38	2.46	13.38
2003	168	1016	16+0	10.04	0.66	38	0.75	13.38
2003	148	1020	16+3	19.79	1.31	30	1.48	13.38
2003	173	1033	16+4	7.03	0.46	35	0.53	13.38
2003	136	1037	16+5	12.4	0.82	45	0.93	13.38
2003	119	1046	16+6	8.6	0.57	38	0.64	13.38
2003	101	1056	16+3	12.73	0.84	37	0.95	13.38
2003	96	1058	16+6	8.36	0.55	40	0.62	13.38
2003	54	1061	16+2	13.12	0.87	37	0.98	13.38
2003	70	1072	16+2	14.12	0.93	23	1.06	13.38
2003	85	1078	16+5	9.8	0.65	36	0.73	13.38
2003	84	1079	16+1	18.65	1.23	36	1.39	13.38
2003	87	1080	16+3	10.97	0.72	40	0.82	13.38
2003	45	1089	16	14.55	0.96	43	1.09	13.38
2003	44	1091	16+5	11.07	0.73	24	0.83	13.38
2003	22	1101	16+1	12.42	0.82	28	0.93	13.38
2003	19	1105	16+6	18.64	1.23	34	1.39	13.38
2003	3	1112	16	11.91	0.79	35	0.89	13.38
2003	504	1119	16+4	11.18	0.74	35	0.84	13.38
2003	500	1123	16+3	11.4	0.75	43	0.85	13.38
2003	492	1128	16+2	6.31	0.42	34	0.47	13.38
2003	483	1134	16+3	10.3	0.68	26	0.77	13.38
2003	475	1141	16+5	4.35	0.29	34	0.33	13.38

2003	467	1144	16+1	13.19	0.87	39	0.99	13.38
2003	454	1155	16	17.44	1.15	36	1.30	13.38
2003	436	1163	16+2	17.12	1.13	23	1.28	13.38
2003	431	1168	16	10.7	0.71	37	0.80	13.38
2003	430	1169	16+4	7.7	0.51	34	0.58	13.38
2003	418	1179	16+1	12.16	0.8	35	0.91	13.38
2003	417	1180	16+2	9.58	0.63	40	0.72	13.38
2003	416	1181	16+6	15.16	0.55	36	1.13	13.38
2003	387	1198	16+5	10.39	0.59	38	0.78	13.38
2003	381	1201	16+0	11.38	0.75	39	0.85	13.38
2003	366	1213	16	7.51	0.5	29	0.56	13.38
2003	364	1215	16	10.08	0.66	31	0.75	13.38
2003	359	1219	16+1	5.25	0.35	36	0.39	13.38
2003	353	1222	16+2	9.84	0.65	30	0.74	13.38
2003	352	1223	16	11.37	0.75	37	0.85	13.38
2003	344	1228	16+5	8.92	0.59	37	0.67	13.38
2003	339	1231	16+3	6.59	0.43	38	0.49	13.38
2003	329	1238	16+6	9.73	0.64	35	0.73	13.38
2003	325	1239	16	8.69	0.57	42	0.65	13.38
2003	320	1242	16+5	10.23	0.67	29	0.76	13.38
2003	312	1248	16+3	7.91	0.52	33	0.59	13.38
2003	304	1253	16	11.21	0.74	30	0.84	13.38
2004	217	1279	16+5	10.76	0.7	37	0.80	13.38
2004	213	1283	16+3	15.05	0.99	36	1.12	13.38
2004	200	1293	16+2	11.02	0.73	34	0.82	13.38
2004	196	1295	16	9.21	0.61	37	0.69	13.38
2004	192	1298	16+2	15.58	1.03	36	1.16	13.38
2004	185	1304	16+4	19.16	1.26	40	1.43	13.38
2004	180	1307	16+4	11.56	0.76	38	0.86	13.38
2004	177	1308	16+1	20.77	1.37	34	1.55	13.38
2004	172	1313	16+5	12.37	0.82	38	0.92	13.38
2004	168	1317	16+6	15.45	1.02	26	1.15	13.38
2004	151	1330	16+3	10.84	0.72	40	0.81	13.38
2004	149	1332	16	15.21	1	35	1.14	13.38
2004	146	1335	16+0	9.98	0.66	40	0.75	13.38
2004	139	1339	16+4	10.43	0.69	29	0.78	13.38
2004	137	1341	16+6	13.65	0.9	34	1.02	13.38
2004	132	1345	16+5	13.41	0.88	35	1.00	13.38
2004	129	1348	16+2	18.6	1.23	33	1.39	13.38
2004	116	1357	16+6	6.86	0.45	37	0.51	13.38
2004	114	1359	16+1	6.07	0.4	35	0.45	13.38
2004	107	1363	16+3	16.73	1.1	36	1.25	13.38
2004	102	1367	16+2	12.58	0.83	38	0.94	13.38
2004	98	1369	16	11.27	0.74	42	0.84	13.38
2004	82	1382	16+5	20.82	1.37	30	1.56	13.38
2004	76	1386	16+3	9.84	0.65	34	0.74	13.38
2004	66	1395	16+1	11.77	0.78	40	0.88	13.38
2004	52	1406	16+2	10.14	0.83	39	0.76	13.38
2004	49	1409	16+2	8.72	0.58	41	0.65	13.38
2004	43	1414	16	14.39	0.95	30	1.08	13.38

2004	24	1433	16+6	15.22	1	34	1.14	13.38
2004	19	1437	16+4	7.49	0.49	36	0.56	13.38
2004	18	1438	16+1	19.57	1.29	29	1.46	13.38
2004	10	1444	16+1	15.49	1.02	21	1.16	13.38
2004	5	1448	16+5	10.76	0.71	36	0.80	13.38
2004	2	1451	16+4	14.68	0.97	39	1.10	13.38
2004	412	1462	16	10.39	0.68	37	0.78	13.38
2004	409	1465	16+1	12.46	0.82	33	0.93	13.38
2004	408	1466	16+4	13.12	0.87	35	0.98	13.38
2004	401	1472	16+5	18.03	1.19	27	1.35	13.38
2004	393	1478	16+3	19.97	1.32	37	1.49	13.38
2004	389	1480	16	17.68	1.17	32	1.32	13.38
2004	382	1486	16+3	10.56	0.7	35	0.79	13.38
2004	376	1491	16+1	16.01	1.06	38	1.20	13.38
2004	375	1492	16+4	11.52	0.76	34	0.86	13.38
2004	373	1494	16+3	11.1	0.73	26	0.83	13.38
2004	366	1499	16+2	21.3	1.4	45	1.59	13.38
2004	357	1505	16	12.98	36	36	0.97	13.38
2004	348	1513	16+5	14.38	0.95	35	1.07	13.38
2004	344	1517	16+1	9.84	0.65	37	0.74	13.38
2004	338	1523	16+1	13.4	0.88	33	1.00	13.38
2004	332	1527	16+1	19.04	1.26	37	1.42	13.38
2004	320	1539	16+1	11.9	0.79	28	0.89	13.38
2004	309	1548	16+3	8.53	0.56	36	0.64	13.38
2004	308	1549	16+6	13.73	0.91	37	1.03	13.38
2004	299	1555	16+1	12.13	0.8	26	0.91	13.38
2004	293	1561	16+1	9.95	0.66	35	0.74	13.38
2004	290	1563	16+3	8.83	0.58	42	0.66	13.38
2004	268	1579	16+2	7.54	0.5	20	0.56	13.38
2004	267	1580	16+1	20.03	1.32	36	1.50	13.38
2004	265	1582	16+4	12.5	0.82	27	0.93	13.38
2004	264	1583	16+5	11.69	0.77	39	0.87	13.38
2004	253	1590	16+5	10.09	0.67	38	0.75	13.38
2004	248	1595	16+0	19.46	1.28	38	1.45	13.38
2004	242	1600	16+5	11.92	0.79	43	0.89	13.38
2004	238	1603	16+1	15.47	1.02	21	1.16	13.38
2004	236	1605	16	9.68	0.66	35	0.72	13.38
2004	228	1612	16+2	11.64	0.77	36	0.87	13.38
2005	193	1618	16	9.88	0.65	36	0.74	13.38
2005	183	1626	16+4	16.3	1.08	38	1.22	13.38
2005	167	1641	16+1	14.88	0.98	23	1.11	13.38
2005	162	1646	16+3	19.26	1.27	37	1.44	13.38
2005	156	1651	16	11.89	0.78	37	0.89	13.38
2005	154	1653	16+5	12.78	0.84	37	0.96	13.38
2005	151	1656	16+5	15.14	1	27	1.13	13.38
2005	140	1664	16+1	19.05	1.26	34	1.42	13.38
2005	136	1667	16+0	10.97	0.72	39	0.82	13.38
2005	131	1672	16+2	16.65	1.1	34	1.24	13.38
2005	124	1679	16+5	13.86	0.91	41	1.04	13.38
2005	119	1683	16+5	14.72	0.97	41	1.10	13.38

2005	118	1684	16	11.03	0.73	36	0.82	13.38
2005	110	1691	16+1	16.4	1.08	25	1.23	13.38
2005	106	1695	16	12.58	0.83	42	0.94	13.38
2005	104	1697	16+6	16.88	1.11	23	1.26	13.38
2005	102	1699	16+1	12.3	0.81	28	0.92	13.38
2005	99	1702	16	16.09	1.06	38	1.20	13.38
2005	84	1714	16+4	15.88	1.05	38	1.19	13.38
2005	80	1718	16+3	18.23	1.2	27	1.36	13.38
2005	67	1727	16+0	18.91	1.25	38	1.41	13.38
2005	62	1731	16	16.16	1.07	36	1.21	13.38
2005	36	1754	16+2	2.59	0.12	38	0.19	13.38
2005	32	1758	16+1	11.24	0.74	28	0.84	13.38
2005	30	1760	16+1	17.68	1.17	32	1.32	13.38
2005	26	1764	16+3	14.25	0.94	37	1.07	13.38
2005	11	1778	16	17.47	1.15	36	1.31	13.38
2005	6	1781	16+3	14.31	0.94	42	1.07	13.38
2005	366	1787	16	13.68	0.9	35	1.02	13.38
2005	362	1790	16+4	13.13	0.87	35	0.98	13.38
2005	355	1796	16+1	11.59	0.76	36	0.87	13.38
2005	350	1800	16+6	10.85	0.72	34	0.81	13.38
2005	349	1801	16+5	15.14	1	37	1.13	13.38
2005	341	1808	16+4	14.37	0.95	40	1.07	13.38
2005	338	1810	16	16.79	1.11	36	1.25	13.38
2005	321	1821	16+4	13.2	0.87	38	0.99	13.38
2005	320	1822	16+1	13.04	0.86	20	0.97	13.38
2005	310	1830	16	12.7	0.84	37	0.95	13.38
2005	309	1831	16+4	9.71	0.64	37	0.73	13.38
2005	307	1833	16+1	7.03	0.46	39	0.53	13.38
2005	303	1836	16	33.69	2.22	26	2.52	13.38
2005	302	1837	16+5	13.15	0.87	37	0.98	13.38
2005	299	1840	16+3	12.97	0.86	34	0.97	13.38
2005	295	1844	16+2	14.72	0.97	37	1.10	13.38
2005	294	1845	16	12.51	0.83	32	0.93	13.38
2005	286	1851	16+4	5.5	0.36	41	0.41	13.38
2005	287	1853	16+5	9.45	0.62	42	0.71	13.38
2005	283	1854	16+6	10.82	0.71	41	0.81	13.38
2005	282	1855	16+1	17.02	1.12	39	1.27	13.38
2005	272	1865	16+4	15.97	1.05	36	1.19	13.38
2005	269	1868	16	17.28	1.14	36	1.29	13.38
2005	262	1876	16+5	8.84	0.58	37	0.66	13.38
2005	261	1877	16+4	13.25	0.87	37	0.99	13.38
2005	260	1878	16+3	13.4	0.88	42	1.00	13.38
2005	256	1881	16+1	13.64	0.9	33	1.02	13.38
2005	254	1883	16	7.85	0.54	38	0.59	13.38
2005	245	1890	16	16.39	1.08	35	1.22	13.38
2005	242	1893	16+5	28.65	1.89	39	2.14	13.38
2005	239	1896	16+4	15.83	1.04	37	1.18	13.38
2005	233	1902	16+4	12.48	0.82	33	0.93	13.38
2005	225	1909	16+3	12.59	0.83	37	0.94	13.38
2005	223	1911	16+2	17.78	1.17	36	1.33	13.38

2005	220	1913	16+2	8.23	0.54	39	0.62	13.38
2005	216	1916	16	13.36	0.88	41	1.00	13.38
2005	215	1917	16+1	26.21	1.73	32	1.96	13.38
2005	212	1920	16	17.66	1.16	42	1.32	13.38
2005	203	1926	16	15.39	1.09	40	1.15	13.38
2006	174	1934	16+4	18.28	1.21	41	1.37	13.38
2006	163	1942	16+4	9.9	0.65	35	0.74	13.38
2006	144	1958	16+1	14.68	0.97	30	1.10	13.38
2006	143	1959	16	26.3	1.73	35	1.97	13.38
2006	140	1961	16+5	12.97	0.86	29	0.97	13.38
2006	130	1967	16+2	15.11	1	22	1.13	13.38
2006	128	1968	16+3	11.28	0.74	33	0.84	13.38
2006	124	1974	16+1	19.23	1.27	26	1.44	13.38
2006	118	1978	16+3	10.63	0.7	33	0.79	13.38
2006	105	1988	16+4	14.11	0.93	25	1.05	13.38
2006	106	1989	16+6	16.36	1.08	37	1.22	13.38
2006	99	1993	16	17.2	1.13	36	1.29	13.38
2006	89	2001	16	12.03	0.79	41	0.90	13.38
2006	84	2007	16+5	14.79	0.98	38	1.11	13.38
2006	57	2028	16+2	19.75	1.3	37	1.48	13.38
2006	53	2030	16	17.33	1.14	31	1.30	13.38
2006	51	2032	16+6	11.08	0.73	41	0.83	13.38
2006	49	2034	16	15.12	1	36	1.13	13.38
2006	47	2036	16+1	16.64	1.1	38	1.24	13.38
2006	46	2037	16+3	14.48	0.95	39	1.08	13.38
2006	34	2044	16+6	13.59	0.9	25	1.02	13.38
2006	33	2045	16+4	6.62	0.44	36	0.49	13.38
2006	31	2047	16	18.6	1.23	37	1.39	13.38
2006	13	2060	16+1	17.83	1.18	37	1.33	13.38
2006	11	2061	16	23.75	1.57	37	1.78	13.38
2006	4	2067	16+6	12.71	0.84	36	0.95	13.38
2006	324	2074	16+2	10.05	0.66	40	0.75	13.38
2006	321	2076	16+2	18.6	1.23	33	1.39	13.38
2006	316	2081	16+3	14.58	0.96	36	1.09	13.38
2006	314	2083	16+5	6.18	0.41	38	0.46	13.38
2006	308	2088	16+0	11.21	0.74	43	0.84	13.38
2006	306	2090	16+4	14.54	0.96	34	1.09	13.38
2006	294	2098	16+1	13.48	0.89	32	1.01	13.38
2006	292	2099	16+3	16.72	1.1	35	1.25	13.38
2006	291	2100	16+2	12.83	0.85	36	0.96	13.38
2006	287	2103	16+2	14.88	0.98	34	1.11	13.38
2006	279	2110	16+3	14.12	0.93	36	1.06	13.38
2006	274	2115	16+2	10.4	0.69	36	0.78	13.38
2006	268	2119	16+1	10.89	0.72	40	0.81	13.38
2006	261	2124	16+2	6.63	0.44	36	0.50	13.38
2006	255	2130	16	13.02	0.86	36	0.97	13.38
2006	244	2139	16+6	16.2	1.07	39	1.21	13.38
2006	243	2140	16+0	12.05	0.79	23	0.90	13.38
2006	241	2142	16+3	12.12	0.8	39	0.91	13.38
2006	239	2143	16+6	11.31	0.75	36	0.85	13.38

2006	234	2148	16+3	9.12	0.6	41	0.68	13.38
2006	230	2151	16+4	11.73	0.77	38	0.88	13.38
2006	229	2152	16+0	11.47	0.76	36	0.86	13.38
2006	223	2156	16+2	17.55	1.16	35	1.31	13.38
2006	216	2161	16+0	12.44	0.82	35	0.93	13.38
2006	214	2162	16	17.16	1.13	21	1.28	13.38
2006	210	2166	16+4	9.72	0.64	37	0.73	13.38
2006	208	2168	16+5	11.49	0.79	40	0.86	13.38
2006	201	2172	16+4	13.65	0.9	35	1.02	13.38
2006	197	2175	16+3	16.8	1.11	23	1.26	13.38
2006	185	2182	16+4	17.47	1.15	35	1.31	13.38
2006	184	2188	16+4	19.72	1.3	38	1.47	13.38
2007	208	2199	16+3	13.08	0.86	36	0.98	13.38
2007	197	2207	16+4	19.81	1.31	33	1.48	13.38
2007	196	2208	16+2	8.54	0.56	41	0.64	13.38
2007	188	2215	16	9.64	0.64	25	0.72	13.38
2007	184	2217	16+6	12.91	0.85	40	0.96	13.38
2007	183	2218	16+5	8.85	0.58	38	0.66	13.38
2007	178	2222	16	14.13	0.93	19	1.06	13.38
2007	168	2228	16+4	17.11	1.13	37	1.28	13.38
2007	160	2234	16	12.45	0.82	32	0.93	13.38
2007	157	2237	16+2	12.81	0.85	40	0.96	13.38
2007	154	2239	16+2	17.39	1.15	31	1.30	13.38
2007	153	2240	16+1	12.52	0.83	36	0.94	13.38
2007	146	2247	16+3	16.63	1.1	26	1.24	13.38
2007	138	2254	16+4	6.83	0.45	39	0.51	13.38
2007	135	2257	16+4	14.71	0.97	38	1.10	13.38
2007	133	2259	16+6	13.11	0.86	32	0.98	13.38
2007	131	2261	16+1	10.36	0.68	39	0.77	13.38
2007	119	2270	16	15.9	1.05	42	1.19	13.38
2007	102	2277	16+1	20.36	1.34	38	1.52	13.38
2007	99	2278	16+2	10.31	0.68	38	0.77	13.38
2007	98	2279	16+4	12.61	0.83	38	0.94	13.38
2007	91	2284	16	18.9	1.25	36	1.41	13.38
2007	89	2286	16	15.09	1	24	1.13	13.38
2007	71	2298	16+2	12.5	0.82	32	0.93	13.38
2007	66	2303	16+1	24.99	1.65	37	1.87	13.38
2007	58	2308	16+2	12.89	0.85	36	0.96	13.38
2007	55	2311	16+2	18.24	1.2	34	1.36	13.38
2007	49	2316	16+6	15.07	0.99	38	1.13	13.38
2007	42	2322	16+3	15.95	1.05	35	1.19	13.38
2007	41	2323	16	11.36	0.75	38	0.85	13.38
2007	33	2331	16+4	9.76	0.64	39	0.73	13.38
2007	20	2341	16+6	10.22	0.67	35	0.76	13.38
2007	19	2342	16+1	22.05	1.45	27	1.65	13.38
2007	16	2345	16+5	8.61	0.57	24	0.64	13.38
2007	15	2346	16+1	14.88	0.98	35	1.11	13.38
2007	12	2348	16+6	10.95	0.72	31	0.82	13.38
2007	7	2352	16+5	10.19	0.67	35	0.76	13.38
2007	5	2354	16+4	9.29	0.61	35	0.69	13.38

2007	4	2355	16+6	9.2	0.61	37	0.69	13.38
2007	3	2356	16	26.17	1.73	32	1.96	13.38
2007	404	2363	16+3	22.3	1.47	33	1.67	13.38
2007	395	2366	16+2	10.8	0.71	38	0.81	13.38
2007	392	2368	16+6	11.7	0.77	31	0.87	13.38
2007	390	2369	16+2	20.7	1.36	38	1.55	13.38
2007	387	2372	16+3	12.7	0.84	39	0.95	13.38
2007	385	2375	16+2	13.1	0.86	34	0.98	13.38
2007	381	2379	16+4	9.5	0.62	23	0.71	13.38
2007	376	2382	16+2	22.4	1.47	35	1.67	13.38
2007	368	2388	16+2	15.8	1.04	32	1.18	13.38
2007	362	2394	16+2	14.2	0.93	27	1.06	13.38
2007	351	2401	16+1	12.16	0.8	31	0.91	13.38
2007	350	2403	16+1	12.44	0.82	34	0.93	13.38
2007	348	2404	16	17.58	1.16	35	1.31	13.38
2007	342	2409	16+4	12.17	0.8	35	0.91	13.38
2007	341	2410	16+2	17.19	1.13	28	1.28	13.38
2007	340	2411	16+5	13.62	0.9	35	1.02	13.38
2007	335	2415	16+2	7.14	0.47	35	0.53	13.38
2007	334	2416	16+6	12.87	0.85	37	0.96	13.38
2007	326	2420	16+5	13.96	0.92	36	1.04	13.38
2007	323	2423	16	12.53	0.83	37	0.94	13.38
2007	316	2428	16+1	17.16	1.13	36	1.28	13.38
2007	312	2432	16+3	17.77	1.17	18	1.33	13.38
2007	311	2433	16+1	12.12	0.8	35	0.91	13.38
2007	301	2442	16+1	21.12	1.39	40	1.58	13.38
2007	289	2452	16+5	13.07	0.86	39	0.98	13.38
2007	287	2454	16+2	14.13	0.93	27	1.06	13.38
2007	280	2460	16+4	11.76	0.78	34	0.88	13.38
2007	279	2461	16	16.49	1.09	27	1.23	13.38
2007	269	2467	16+4	10.64	0.7	43	0.80	13.38
2007	268	2468	16	14.67	0.97	39	1.10	13.38
2007	263	2472	16+3	9.5	0.63	37	0.71	13.38
2007	261	2473	16+1	11.61	0.77	40	0.87	13.38
2007	257	2477	16+5	11.5	0.76	43	0.86	13.38
2007	251	2482	16+2	10.93	0.72	34	0.82	13.38
2007	287	2495	16+3	451.62	29.79	29	33.75	13.38
2007	229	2503	16+6	12.44	0.82	26	0.93	13.38
2007	228	2504	16+3	10.4	0.69	34	0.78	13.38
2007	227	2505	16+4	11.08	0.73	22	0.83	13.38
2007	223	2509	16+2	15.75	1.04	34	1.18	13.38
2007	221	2511	16+1	14.04	0.93	41	1.05	13.38
2008	17417	2520	16+5	12.4	0.81	30	0.93	13.38
2008	17247	2526	16	17.7	1.17	39	1.32	13.38
2008	17201	2530	16+6	15.6	1.03	26	1.17	13.38
2008	17146	2534	16+1	19.9	1.31	41	1.49	13.38
2008	17124	2537	16+2	17.8	1.17	38	1.33	13.38
2008	17114	2538	16+6	12.5	0.83	35	0.93	13.38
2008	16958	2554	16+1	14.6	0.96	37	1.09	13.38
2008	16880	2560	16+4	17.1	1.13	37	1.28	13.38

2008	16848	2564	16	13.6	0.9	33	1.02	13.38
2008	16847	2565	16+1	10.8	0.71	36	0.81	13.38
2008	16775	2573	16+5	9.6	0.63	38	0.72	13.38
2008	16707	2578	16+4	18.9	1.25	36	1.41	13.38
2008	16794	2579	16+1	16.8	1.11	24	1.26	13.38
2008	16614	2588	16+5	8.3	0.55	38	0.62	13.38
2008	16622	2590	16+4	11.6	0.77	41	0.87	13.38
2008	16576	2594	16	14.3	0.94	32	1.07	13.38
2008	16590	2597	16+4	15.1	0.9	41	1.13	13.38
2008	16512	2603	16+4	13.6	0.89	42	1.02	13.38
2008	16529	2604	16+5	17.2	1.13	37	1.29	13.38
2008	16455	2614	16+2	20.1	1.33	38	1.50	13.38
2008	16474	2617	16+6	16.9	1.11	27	1.26	13.38
2008	16404	2619	16+2	11.9	0.79	36	0.89	13.38
2008	16417	2622	16+3	10.9	0.72	42	0.81	13.38
2008	16375	2623	16	16.6	1.09	36	1.24	13.38
2008	16354	2625	16+6	8.4	0.56	37	0.63	13.38
2008	16303	2632	16+2	17.5	1.15	41	1.31	13.38
2008	7	2640	16+5	14	0.92	40	1.05	13.38
2008	3	2644	16+2	11.9	0.78	38	0.89	13.38
2008	2	2645	16+1	10.6	0.7	39	0.79	13.38
2008	18437	2654	16	9.2	0.6	40	0.69	13.38
2008	18369	2662	16+3	14.2	0.94	38	1.06	13.38
2008	18235	2667	16+6	13.9	0.92	39	1.04	13.38
2008	18215	2669	16+4	15.5	1.02	34	1.16	13.38
2008	18175	2671	16+4	12.9	0.85	39	0.96	13.38
2008	18147	2674	16	9.2	0.61	39	0.69	13.38
2008	18103	2680	16+5	16.3	1.08	42	1.22	13.38
2008	18088	2682	16+3	14.9	0.98	28	1.11	13.38
2008	17980	2690	16	12	0.79	36	0.90	13.38
2008	17936	2691	16+4	8.1	0.54	36	0.61	13.38
2008	17862	2698	16+1	20.7	1.37	39	1.55	13.38
2008	17816	2703	16+2	11.8	0.78	37	0.88	13.38
2008	117796	2704	16+4	9.4	0.62	29	0.70	13.38
2008	17779	2711	16+3	16	1.06	37	1.20	13.38
2008	17765	2715	16+3	14.3	0.95	30	1.07	13.38
2008	17762	2716	16	38.7	2.55	22	2.89	13.38
2008	17598	2722	16+5	13	0.86	36	0.97	13.38
2008	17595	2723	16+3	14.5	0.96	39	1.08	13.38
2008	17433	2731	16+5	11.8	0.78	37	0.88	13.38
2009	20315	2739	16+1	9.2	0.6	35	0.69	13.38
2009		2740	16+6	13.3	0.88	37	0.99	13.38
2009	20304	2742	16+3	11.4	0.75	38	0.85	13.38
2009	20297	2743	16+1	13.2	0.87	38	0.99	13.38
2009		2752	16+2	10.5	0.69	35	0.78	13.38
2009	20097	2754	16+2	15.3	1.01	37	1.14	13.38
2009	20160	2755	16+1	10.3	0.52	36	0.77	13.38
2009	20094	2760	16	15.5	1.02	40	1.16	13.38
2009	20025	2765	16+1	5.6	0.37	38	0.42	13.38
2009	19954	2768	16+4	10.6	0.7	36	0.79	13.38

2009	19919	2769	16+2	14.6	0.97	24	1.09	13.38
2009	19715	2778	16+6	16.2	1.07	36	1.21	13.38
2009	19643	2780	16+4	14.5	0.96	37	1.08	13.38
2009	19659	2781	16+1	12.7	0.84	40	0.95	13.38
2009	19646	2782	16+2	12.7	0.84	37	0.95	13.38
2009		2783	16+3	15.5	1.02	39	1.16	13.38
2009	19653	2784	16+4	11.6	0.77	41	0.87	13.38
2009	19607	2788	16+3	13.4	0.88	31	1.00	13.38
2009	19423	2803	16+2	12	0.79	29	0.90	13.38
2009	19381	2812	16+2	10.8	0.71	37	0.81	13.38
2009	19272	2815	16	15.2	1.01	43	1.14	13.38
2009	19081	2822	16+3	11	0.72	32	0.82	13.38
2009		2826	16+6	13.1	0.87	40	0.98	13.38
2009	18918	2829	16+3	11	0.72	38	0.82	13.38
2009	18892	2831	16	16.8	1.11	34	1.26	13.38
2009	18835	2839	16+6	13.9	0.91	37	1.04	13.38
2009	18757	2846	16	14.3	0.94	39	1.07	13.38
2009	18714	2850	16+4	17.1	1.12	38	1.28	13.38
2009	18683	2854	16+3	12.9	0.85	35	0.96	13.38
2009	18626	2857	16+3	13.2	0.87	23	0.99	13.38
2009	18624	2859	16	12.4	0.82	33	0.93	13.38
2009	18601	2861	16+4	14.2	0.94	24	1.06	13.38
2010	22848	2863	16+2	15.8	1.04	38	1.18	13.38
2010	22833	2866	16+5	8.1	0.54	31	0.61	13.38
2010	22704	2876	16+5	8.4	0.55	35	0.63	13.38
2010	22649	2878	16+3	15.9	1.05	34	1.19	13.38
2010	22608	2880	16	17.8	1.18	43	1.33	13.38
2010	22587	2881	16+2	11.3	0.74	40	0.84	13.38
2010		2889	16+1	22.6	1.49	31	1.69	13.38
2010	22429	2892	16+5	8	0.52	31	0.60	13.38
2010	22392	2894	16+1	16.7	1.1	39	1.25	13.38
2010	22363	2896	16	27	1.78	41	2.02	13.38
2010	22362	2897	16+2	13.2	0.87	39	0.99	13.38
2010	22344	2899	16+5	14	0.92	37	1.05	13.38
2010	22293	2903	16+3	15	0.99	37	1.12	13.38
2010	22289	2905	16+3	20.7	1.37	39	1.55	13.38
2010	22327	2907	16+2	9.6	0.63	42	0.72	13.38
2010	21928	2931	16+6	18.7	1.23	29	1.40	13.38
2010	21896	2935	16+1	14	0.92	39	1.05	13.38
2010	21793	2943	16+6	8.3	0.55	30	0.62	13.38
2010	21542	2948	16+3	15.9	1.05	39	1.19	13.38
2010		2951	16+6	9.9	0.65	40	0.74	13.38
2009	21297	2962	16+3	20.2	1.33	33	1.51	13.38
2009	21012	2973	16+1	17.3	1.14	39	1.29	13.38
2009	20921	2978	16+3	11.9	0.78	38	0.89	13.38
2009	20862	2980	16+1	6.2	0.41	35	0.46	13.38
2009	20772	2989	16+2	17.2	1.13	36	1.29	13.38
2009	20713	2991	16	16.8	1.11		1.26	13.38
2009	20719	2994	16+3	11	0.73	38	0.82	13.38
2009	20677	2998	16+3	12.8	0.84	37	0.96	13.38

2009	20540	3008	16	8.4	0.55	33	0.63	13.38
2009	20514	3010	16+6	7.4	0.49	31	0.55	13.38
2010	23733	3030	16+4	15	0.99	38	1.12	13.38
2010	23737	3031	16+1	139.8	9.22	20	10.45	13.38
2010		3044	16+3	12.7	0.84	40	0.95	13.38
2010	23314	3050	16+2	14.5	0.96	37	1.08	13.38
2010	23321	3053	16+5	13.6	0.89	43	1.02	13.38
2010	23122	3054	16+4	8.5	0.56	39	0.64	13.38
2010	23102	3056	16+1	25.1	1.66	38	1.88	13.38
2010	23052	3062	16+3	12.9	0.85	33	0.96	13.38
2010	23032	3063	16+1	18.7	1.23	36	1.40	13.38
2010	23029	3066	16+5	12.9	0.85	30	0.96	13.38
2010	22897	3072	16+5	13.8	0.91	37	1.03	13.38
2011	25275	3075	16+1	24.24	1.6	33	1.81	13.38
2011	25256	3079	16+5	15.26	1.01	35	1.14	13.38
2011	25231	3080	16+6	13.19	0.87	35	0.99	13.38
2011	25187	3092	16	10.14	0.67	31	0.76	13.38
2011	25117	3093	16+4	7.33	0.48	34	0.55	13.38
2011	25039	3098	16	18.14	1.2	36	1.36	13.38
2011	24921	3109	16+3	17.95	1.18	39	1.34	13.38
2011	24914	3110	16+4	15.37	1.01	35	1.15	13.38
2011	24920	3112	16+2	18.71	1.23	31	1.40	13.38
2011	24906	3114	16+2	19.51	1.29	38	1.46	13.38
2011	24784	3125	16+4	13.1	0.86	43	0.98	13.38
2011	24714	3131	16	18.1	1.19	35	1.35	13.38
2011	24710	3132	16+5	10.6	0.7	36	0.79	13.38
2011	24713	3133	16+6	50.9	3.35	27	3.80	13.38
2011	24702	3135	16+2	12.9	0.85	36	0.96	13.38
2011	24634	3139	16+1	11.7	0.77	36	0.87	13.38
2011	24472	3149	16+5	23.7	1.56	39	1.77	13.38
2011	24435	3155	16+6	12.7	0.84	38	0.95	13.38
2011	24434	3156	16+2	18.5	1.22	25	1.38	13.38
2011	24417	3157	16+5	10.3	0.68	42	0.77	13.38
2011	24424	3158	16+2	13	0.86	34	0.97	13.38
2011	24311	3164	16+4	18.16	1.2	37	1.36	13.38
2011	24269	3168	16+6	12.77	0.84	37	0.95	13.38
2011	24270	3170	16+3	9.18	0.61	39	0.69	13.38
2011	24265	3171	16+1	12	0.79	41	0.90	13.38
2011	24174	3178	16+6	12.6	0.83	31	0.94	13.38
2011	24064	3185	16+2	15.2	1	36	1.14	13.38
2011	24024	3187	16+6	17.1	1.13	38	1.28	13.38
2011	24012	3189	16+3	21.7	1.43	41	1.62	13.38
2012	853	3200	16+3	14.26	0.94	37	1.07	13.38
2012	971	3201	16+1	14.95	0.99	33	1.12	13.38
2012	994	3202	16+5	16.5	0.95	38	1.23	13.38
2012	wagner.k	3204	16+6	10.13	0.67	35	0.76	13.38
2012	942	3206	16+2	10.86	0.72	41	0.81	13.38
2012	Schleich. M	3209	16+3	12.59	0.83	24	0.94	13.38
2012	903	3211	16+3	16.35	1.08	35	1.22	13.38

2012	2163	3212	16+2	18.59	1.23	38	1.39	13.38
2012	882	3214	16+5	13.21	0.87	44	0.99	13.38
2012	771	3220	16	18.61	1.23	34	1.39	13.38
2012	770	3222	16+5	13.64	0.9	38	1.02	13.38
2012	744	3224	16+5	10.09	0.67	27	0.75	13.38
2012	j05-4301	3226	16	12.24	0.81	40	0.91	13.38
2012	968	3232	16+6	8.94	0.59	31	0.67	13.38
2012	659	3233	16+5	15.85	1.05	36	1.18	13.38
2012	633	3236	16+3	16.12	1.06	39	1.20	13.38
2012	532	3240	16+3	11.05	0.73	38	0.83	13.38
2012	J07-4037	3247	16+4	13.11	0.86	41	0.98	13.38
2012	480	3249	16+6	18.7	1.23	44	1.40	13.38
2012	444	3251	16+4	11.66	0.77	42	0.87	13.38
2012	J07-4191	3254	16+5	9.33	0.62	25	0.70	13.38
2012	437	3256	16+6	10.3	0.68	37	0.77	13.38
2012	693	3265	16	14.13	0.93	25	1.06	13.38
2012	384	3270	16+6	9.87	0.65	40	0.74	13.38
2012	301	3271	16+1	11.48	0.76	28	0.86	13.38
2012	0343	3273	16+2	14.78	0.97	31	1.10	13.38
2012	0308	3277	16+4	12.46	0.82	34	0.93	13.38
2012	224	3281	16+5	10.33	0.68	38	0.77	13.38
2012	0220	3282	16	13.84	0.91	36	1.03	13.38
2012	215	3283	16+5	14.44	0.95	39	1.08	13.38
2012	Siegert.S	3285	16	15.28	1.01	38	1.14	13.38
2012	0092	3289	16+1	11.93	0.79	32	0.89	13.38
2012	0065	3291	16+5	12.93	0.85	39	0.97	13.38

Tab 17 MoM of AFP in the 16th W.O.G

year	Amniotic Fluid	patient number	W.O.G	AFP	MoM of AFP, Giessen	matern al age	MoM of AFP, Jena	Median
2000	490	14	17+2	7.4	0.64		0.66	11.265
2000	491	15	17+5	8.2	0.71		0.73	11.265
2000	486	21	17+0	13.5	1.18		1.20	11.265
2000	456	28	17+6	8.2	0.72		0.73	11.265
2000	452	31	17+1	9.1	0.79		0.81	11.265
2000	441	34	17+5	10.1	0.88		0.90	11.265
2000	437	39	17+1	9.5	0.83	36	0.84	11.265
2000	473	42	17+2	17.4	1.51	34	1.54	11.265
2000	477	47	17+2	5.5	0.48		0.49	11.265
2000	426	50	17+0	13.7	1.2		1.22	11.265
2000	417	58	17+4	6	0.53		0.53	11.265
2000	402	65	17+5	14.6	1.27	37	1.30	11.265
2000	398	66	17	20.3	1.5		1.80	11.265
2000	382	85	17+2	12.4	1.08		1.10	11.265
2000	377	95	17+6	11.5	1		1.02	11.265
2000	315	112	17	38.2	3.2		3.39	11.265
2000	320	118	17	19.9	1.58		1.77	11.265

2000	305	122	17+4	11.1	0.93		0.99	11.265
2000	310	123	17+0	10.3	0.87		0.91	11.265
2000	307	126	17+5	12.1	1.02		1.07	11.265
2000	290	135	17+5	11.7	0.98		1.04	11.265
2000	295	136	17+3	30.1	2.62		2.67	11.265
2000	303	139	17+3	16	1.34		1.42	11.265
2000	279	141	17+0	11.2	0.94		0.99	11.265
2000	282	145	17+2	10.1	0.85	34	0.90	11.265
2000	272	151	17	12.8	0.91	34	1.14	11.265
2000	260	153	17+3	10	0.84	30	0.89	11.265
2000	256	157	17+5	14.9	1.25	31	1.32	11.265
2000	267	160	17+5	9.8	0.82	37	0.87	11.265
2000	230	166	17+1	10.3	0.87	24	0.91	11.265
2000	208	177	17+3	14.8	1.24	35	1.31	11.265
2000	209	180	17	8.53	0.72	34	0.76	11.265
2000	192	193	17+2	13.4	1.13	29	1.19	11.265
2000	186	194	17	13.2	0.94	38	1.17	11.265
2000	162	206	17+4	11	0.92	41	0.98	11.265
2000	138	227	17+1	10.2	0.86	39	0.91	11.265
2000	140	228	17	16.4	1.117	38	1.46	11.265
2000	123	233	17+2	13.3	1.12	26	1.18	11.265
2000	132	239	17+2	12.5	1.05	36	1.11	11.265
2000	134	242	17	11.3	0.95	37	1.00	11.265
2000	86	256	17+6	8	0.67	34	0.71	11.265
2000	72	258	17+5	5	0.42	39	0.44	11.265
2000	45	275	17+2	13.8	1.16	36	1.23	11.265
2000	17	286	17+1	17.4	1.46	38	1.54	11.265
2000	5	294	17+1	13.8	1.16	36	1.23	11.265
2001	264	305	17+2	16.8	1.46	29	1.49	11.265
2001	261	307	17+5	16.12	1.4	35	1.43	11.265
2001	269	313	17+1	22.87	1.99	43	2.03	11.265
2001	251	316	17	19.44	1.44	40	1.73	11.265
2001	253	317	17+3	10.07	0.88	39	0.89	11.265
2001	239	320	17+1	29.74	2.59	36	2.64	11.265
2001	213	339	17	13.76	1.2	39	1.22	11.265
2001	183	359	17+5	12.55	1.09	39	1.11	11.265
2001	158	370	17	10.95	0.81	41	0.97	11.265
2001	149	379	17	19.18	1.42	34	1.70	11.265
2001	145	382	17	12.55	1.09	41	1.11	11.265
2001	134	387	17+3	11.23	0.98	37	1.00	11.265
2001	132	388	17	15.74	1.37	39	1.40	11.265
2001	116	400	17	18.21	1.58	37	1.62	11.265
2001	112	406	17+2	14.83	1.29	26	1.32	11.265
2001	73	435	17+1	16.21	1.41	40	1.44	11.265
2001	67	438	17+4	30.69	2.67	35	2.72	11.265
2001	65	439	17+6	8.69	0.76	21	0.77	11.265
2001	62	443	17	16.86	1.25	30	1.50	11.265
2001	52	448	17+1	19.46	1.69	37	1.73	11.265
2001	34	460	17+2	13.51	1.17	35	1.20	11.265
2001	30	464	17+2	11.15	0.97	37	0.99	11.265

2001	29	465	17+4	12.62	1.1	38	1.12	11.265
2001	24	469	17+3	10.16	0.88	24	0.90	11.265
2001	4	474	17+1	13.5	1.17	23	1.20	11.265
2001	1	477	17	19.2	1.42	36	1.70	11.265
2001	513	478	17+6	12.04	0.99	21	1.07	11.265
2001	522	480	17+3	12.52	1.03	35	1.11	11.265
2001	499	501	17+6	13.13	1.08	27	1.17	11.265
2001	470	525	17+3	7.88	0.65	34	0.70	11.265
2001	459	533	17+1	6.55	0.54	20	0.58	11.265
2001	457	536	17	8.56	0.56	36	0.76	11.265
2001	451	538	17+3	9.18	0.75	37	0.81	11.265
2001	449	540	17+4	38.87	3.19	32	3.45	11.265
2001	448	542	17+3	12.77	1.05	36	1.13	11.265
2001	447	543	17	10.95	0.9	32	0.97	11.265
2001	408	571	17+1	11.28	0.92	33	1.00	11.265
2001	361	593	17+1	9.49	0.78	23	0.84	11.265
2001	368	596	17+6	6.36	0.52	41	0.56	11.265
2001	346	599	17	15.16	0.76	36	1.35	11.265
2001	338	604	17+1	10.3	0.84	27	0.91	11.265
2001	333	607	17+5	15.21	1.25	27	1.35	11.265
2001	313	616	17	13.86	0.91	34	1.23	11.265
2001	315	619	17+1	9.97	0.82	41	0.89	11.265
2001	302	626	17+6	9.93	0.86	39	0.88	11.265
2002	272	648	17+5	13.04	1.07	32	1.16	11.265
2002	223	674	17+6	13.96	1.14	37	1.24	11.265
2002	220	679	17+1	17.03	1.4	30	1.51	11.265
2002	205	688	17+3	11.61	0.95	37	1.03	11.265
2002	199	693	17+4	12.07	0.99	26	1.07	11.265
2002	191	696	17	15.09	1	36	1.34	11.265
2002	181	705	17	10.99	0.9	42	0.98	11.265
2002	160	721	17+1	12.65	1.04	37	1.12	11.265
2002	151	728	17	16.88	1.38	27	1.50	11.265
2002	148	730	17+2	10.44	0.86	39	0.93	11.265
2002	144	734	17+3	8.81	0.72	30	0.78	11.265
2002	126	745	17+3	13.12	1.08	31	1.16	11.265
2002	108	764	17	7.57	0.62	34	0.67	11.265
2002	103	766	17+2	13.95	1.14	40	1.24	11.265
2002	77	784	17+2	15.81	1.3	32	1.40	11.265
2002	64	786	17+4	10.02	0.82	40	0.89	11.265
2002	74	789	17	20.27	1.66	35	1.80	11.265
2002	69	793	17+4	12.08	0.99	34	1.07	11.265
2002	48	802	17	10.86	0.89	27	0.96	11.265
2002	50	807	17+4	9.85	0.81	34	0.87	11.265
2002	14	822	17	14.27	1.17	32	1.27	11.265
2002	19	827	17+5	7.49	0.61	33	0.66	11.265
2002	497	838	17+2	13.62	1.12	24	1.21	11.265
2002	489	845	17+2	13.7	1.12	21	1.22	11.265
2002	440	852	17+1	11.71	0.96	30	1.04	11.265
2002	469	858	17+4	7.62	0.62	31	0.68	11.265
2002	462	862	17+5	7.42	0.61	28	0.66	11.265

2002	459	865	17+5	12.73	1.04	28	1.13	11.265
2002	425	884	17+1	9.72	0.8	27	0.86	11.265
2002	419	886	17+1	11.69	0.96	37	1.04	11.265
2002	408	896	17+2	14.52	1.19	41	1.29	11.265
2002	392	898	17+6	8.22	0.67	37	0.73	11.265
2002	390	902	17+4	10.78	0.88	32	0.96	11.265
2002	379	906	17+5	9.77	0.8	27	0.87	11.265
2002	378	908	17+4	10.57	0.87	35	0.94	11.265
2002	382	909	17+1	11.02	0.9	29	0.98	11.265
2002	376	911	17	18.53	1.52	39	1.64	11.265
2002	367	914	17+5	12.26	1	39	1.09	11.265
2002	366	915	17+6	13.18	1.08	36	1.17	11.265
2002	355	920	17+2	5.44	0.45	22	0.48	11.265
2002	335	932	17+2	5.99	0.49	37	0.53	11.265
2002	325	941	17+1	9.69	0.79	36	0.86	11.265
2002	319	943	17+1	17.48	1.43	38	1.55	11.265
2002	306	957	17+1	13.04	1.07	33	1.16	11.265
2002	291	964	17+1	16.4	1.34	35	1.46	11.265
2002	287	967	17+2	10.68	0.88	26	0.95	11.265
2002	276	974	17+3	13.45	1.1	39	1.19	11.265
2002	270	975	17+6	8.21	0.67	32	0.73	11.265
2003	253	980	17+4	22.06	1.81	40	1.96	11.265
2003	240	986	17	6.18	0.51	44	0.55	11.265
2003	238	988	17	8.01	0.66	28	0.71	11.265
2003	231	993	17+2	11.35	0.93	34	1.01	11.265
2003	214	1001	17	7.36	0.6	35	0.65	11.265
2003	188	1009	17+6	11.2	0.92	36	0.99	11.265
2003	145	1018	17+6	12.09	0.99	35	1.07	11.265
2003	170	1032	17+3	13.67	1.12	37	1.21	11.265
2003	177	1034	17+5	15.96	1.31	35	1.42	11.265
2003	131	1040	17+3	15.77	1.29	29	1.40	11.265
2003	114	1052	17+2	12.32	1.01	38	1.09	11.265
2003	106	1054	17+2	15.44	1.27	30	1.37	11.265
2003	100	1057	17+4	13.4	1.1	38	1.19	11.265
2003	95	1059	17+3	4.11	0.34	29	0.36	11.265
2003	55	1062	17+5	12.77	1.05	27	1.13	11.265
2003	56	1064	17+3	10.92	0.9	36	0.97	11.265
2003	58	1065	17	10.81	0.71	38	0.96	11.265
2003	65	1069	17+4	14.16	1.16	36	1.26	11.265
2003	64	1070	17+2	10.32	0.85	26	0.92	11.265
2003	74	1074	17+5	11.05	0.91	36	0.98	11.265
2003	50	1087	17+2	7.96	0.65	26	0.71	11.265
2003	49	1088	17+5	11.75	0.96	36	1.04	11.265
2003	38	1092	17+5	8.37	0.69	18	0.74	11.265
2003	30	1097	17+6	13.73	1.13	36	1.22	11.265
2003	16	1103	17+2	18.22	1.49	41	1.62	11.265
2003	11	1108	17+1	13.82	1.13	33	1.23	11.265
2003	4	1114	17+2	9.52	0.78	41	0.85	11.265
2003	509	1116	17+2	6.5	0.53	35	0.58	11.265
2003	502	1121	17+4	7.24	0.59	21	0.64	11.265

2003	501	1122	17+3	11.12	0.91	36	0.99	11.265
2003	495	1126	17+1	10.43	0.85	30	0.93	11.265
2003	493	1127	17+5	6.89	0.56	36	0.61	11.265
2003	491	1129	17	7.57	0.62	36	0.67	11.265
2003	486	1132	17+4	9.91	0.81	31	0.88	11.265
2003	481	1136	17+5	7.44	0.61	31	0.66	11.265
2003	456	1139	17+1	11.19	0.92	38	0.99	11.265
2003	474	1143	17+4	7.25	0.59	24	0.64	11.265
2003	459	1152	17+6	7.39	0.61	30	0.66	11.265
2003	443	1159	17+6	12.1	0.99	38	1.07	11.265
2003	438	1162	17+3	12.2	0.93	34	1.08	11.265
2003	425	1174	17+3	6.42	0.35	22	0.57	11.265
2003	400	1189	17+3	5.85	0.48	36	0.52	11.265
2003	397	1191	17+2	9.98	0.82	36	0.89	11.265
2003	394	1192	17+1	8.62	0.71	27	0.77	11.265
2003	389	1194	17+3	8.26	0.68	29	0.73	11.265
2003	387	1196	17+2	7.3	0.6	25	0.65	11.265
2003	373	1208	17+4	7.04	0.58	35	0.62	11.265
2003	346	1227	17+6	8.93	0.73	37	0.79	11.265
2003	340	1230	17+2	6.21	0.51	23	0.55	11.265
2003	328	1236	17+4	9.62	0.79	38	0.85	11.265
2003	322	1243	17+2	12.01	0.98	24	1.07	11.265
2003	308	1250	17+3	13.94	1.14	34	1.24	11.265
2003	307	1251	17+1	17.35	1.42	30	1.54	11.265
2003	288	1264	17+2	11	0.9	37	0.98	11.265
2003	286	1265	17	11.46	0.94	34	1.02	11.265
2004	206	1290	17+3	8.49	0.7	38	0.75	11.265
2004	191	1299	17+1	12	0.98	39	1.07	11.265
2004	184	1305	17+5	14.67	1.2	35	1.30	11.265
2004	147	1334	17	10.32	0.85	29	0.92	11.265
2004	121	1354	17	17	1.12	37	1.51	11.265
2004	99	1368	17+5	10.62	0.87	36	0.94	11.265
2004	97	1370	17+4	10.95	0.9	35	0.97	11.265
2004	96	1371	17+3	9.18	0.75	38	0.81	11.265
2004	84	1380	17+6	6.48	0.53	34	0.58	11.265
2004	56	1402	17+2	9.69	0.79	37	0.86	11.265
2004	53	1405	17+3	11.67	0.96	32	1.04	11.265
2004	51	1407	17+6	9.3	0.76	29	0.83	11.265
2004	48	1410	17+0	6.8	0.56	27	0.60	11.265
2004	47	1411	17	13.06	1.07	35	1.16	11.265
2004	34	1423	17+3	8.55	0.7	18	0.76	11.265
2004	31	1426	17+1	13.88	1.14	27	1.23	11.265
2004	16	1440	17	14.26	1.17	40	1.27	11.265
2004	4	1449	17+4	18.76	1.54	40	1.67	11.265
2004	417	1458	17	13.37	0.88	36	1.19	11.265
2004	411	1463	17	9.1	0.75	35	0.81	11.265
2004	406	1467	17+6	8.23	0.67	40	0.73	11.265
2004	399	1474	17	14.58	1.2	28	1.29	11.265
2004	374	1493	17+5	7.74	0.63	35	0.69	11.265
2004	372	1495	17+3	7.07	0.58	41	0.63	11.265

2004	368	1497	17+2	8.54	0.7	26	0.76	11.265
2004	354	1508	17+4	10.78	0.88	34	0.96	11.265
2004	353	1509	17+3	19.39	1.59	38	1.72	11.265
2004	347	1514	17+0	10.92	0.9	25	0.97	11.265
2004	346	1515	17+2	14.02	1.15	37	1.24	11.265
2004	319	1540	17	10.39	0.9	37	0.92	11.265
2004	316	1543	17+5	11.29	0.93	34	1.00	11.265
2004	311	1547	17+1	16.45	1.35	39	1.46	11.265
2004	303	1553	17+1	8.86	0.73	36	0.79	11.265
2004	294	1560	17+4	10.45	0.86	21	0.93	11.265
2004	279	1571	17+5	11.09	0.91	35	0.98	11.265
2004	275	1574	17+2	9.69	0.79	35	0.86	11.265
2004	263	1584	17+1	8.22	0.67	37	0.73	11.265
2004	258	1587	17+6	6.18	0.51	29	0.55	11.265
2004	246	1596	17	9.97	0.82	31	0.89	11.265
2004	240	1601	17+3	5.47	0.45	22	0.49	11.265
2004	237	1604	17+3	9.29	0.77	37	0.82	11.265
2004	233	1607	17+3	9.25	0.76	29	0.82	11.265
2004	233	1615	17+5	7.44	0.61	39	0.66	11.265
2005	181	1628	17	14.1	1.16	36	1.25	11.265
2005	175	1633	17+3	17.18	1.41	29	1.53	11.265
2005	173	1635	17+1	14.57	1.19	25	1.29	11.265
2005	171	1637	17	7.83	0.64	29	0.70	11.265
2005	168	1640	17+2	9.83	0.81	27	0.87	11.265
2005	164	1643	17+4	8.6	0.7	40	0.76	11.265
2005	165	1643	17+5	7.16	0.59	40	0.64	11.265
2005	158	1650	17	6.27	0.51	37	0.56	11.265
2005	149	1657	17+4	6.96	0.57	44	0.62	11.265
2005	147	1659	17+6	10.37	0.85	35	0.92	11.265
2005	145	1661	17+0	9.25	0.76	23	0.82	11.265
2005	141	1663	17+2	10.93	0.9	36	0.97	11.265
2005	139	1665	17+2	11	0.9	36	0.98	11.265
2005	132	1671	17+3	12.13	0.99	32	1.08	11.265
2005	129	1674	17	10.46	0.86	28	0.93	11.265
2005	101	1700	17+2	8.91	0.73	38	0.79	11.265
2005	91	1708	17+1	11.14	0.91	41	0.99	11.265
2005	90	1709	17+4	8.94	0.73	37	0.79	11.265
2005	86	1713	17+5	4.33	0.36	32	0.38	11.265
2005	71	1723	17+1	10.6	0.87	30	0.94	11.265
2005	64	1729	17+1	10.79	0.88	29	0.96	11.265
2005	60	1734	17+2	15.32	1.26	35	1.36	11.265
2005	38	1752	17	9.65	0.79	37	0.86	11.265
2005	16	1773	17	12.92	1.06	45	1.15	11.265
2005	13	1776	17+4	8.39	0.69	23	0.74	11.265
2005	12	1777	17+1	15.34	1.26	34	1.36	11.265
2005	1	1786	17	14.39	1.18	36	1.28	11.265
2005	363	1789	17+4	9.1	0.75	35	0.81	11.265
2005	358	1794	17+6	9.67	0.79	26	0.86	11.265
2005	347	1802	17+4	7.03	0.58	25	0.62	11.265
2005	330	1814	17	15.44	1.27	35	1.37	11.265

2005	324	1818	17+1	10.11	0.83	26	0.90	11.265
2005	322	1820	17+2	13.17	1.08	35	1.17	11.265
2005	319	1823	17+3	257.13	21.08	41	22.83	11.265
2005	306	1834	17+2	12.25	1	35	1.09	11.265
2005	304	1835	17+3	11.71	0.96	38	1.04	11.265
2005	301	1838	17+3	19.07	1.56	33	1.69	11.265
2005	293	1846	17+3	9.21	0.75	34	0.82	11.265
2005	271	1866	17+3	10.32	0.85	41	0.92	11.265
2005	259	1879	17+1	15.62	1.28	36	1.39	11.265
2005	253	1884	17+3	24.17	1.95	39	2.15	11.265
2005	240	1895	17	24.59	2.02	37	2.18	11.265
2005	235	1900	17+4	9.48	0.78	37	0.84	11.265
2005	228	1906	17	8.54	0.7	38	0.76	11.265
2005	227	1907	17+3	12.18	1	38	1.08	11.265
2005	221	1912	17+1	14.13	1.16	31	1.25	11.265
2005	218	1914	17+1	12.73	1.04	37	1.13	11.265
2005	200	1929	17+1	15.71	1.29	37	1.39	11.265
2006	170	1939	17+1	34.01	2.79	43	3.02	11.265
2006	162	1943	17	10.61	0.87	40	0.94	11.265
2006	151	1953	17+6	5.74	0.47	39	0.51	11.265
2006	148	1956	17+6	8.72	0.71	25	0.77	11.265
2006	114	1981	17+2	8.9	0.73	39	0.79	11.265
2006	112	1983	17+1	12.25	1	36	1.09	11.265
2006	111	1985	17+5	10.11	0.83	38	0.90	11.265
2006	108	1987	17+1	8.31	0.68	36	0.74	11.265
2006	98	1994	17+5	12.26	1.01	37	1.09	11.265
2006	94	1996	17+4	11.64	0.95	36	1.03	11.265
2006	91	1999	17	10.45	0.86	22	0.93	11.265
2006	75	2013	17+5	10.39	0.85	36	0.92	11.265
2006	69	2019	17+1	15.07	1.24	35	1.34	11.265
2006	65	2022	17+4	12.06	0.99	28	1.07	11.265
2006	63	2024	17+6	6.12	0.5	23	0.54	11.265
2006	60	2027	17	11.98	0.98	37	1.06	11.265
2006	18	2057	17	12.19	1	28	1.08	11.265
2006	14	2059	17+3	7.78	0.64	28	0.69	11.265
2006	5	2066	17+5	8.91	0.73	30	0.79	11.265
2006	2	2068	17	8.81	0.72	37	0.78	11.265
2006	319	2078	17+3	11.08	0.91	36	0.98	11.265
2006	317	2080	17+2	12.7	1.04	34	1.13	11.265
2006	309	2087	17+1	8	0.66	38	0.71	11.265
2006	307	2089	17+6	8.39	0.69	23	0.74	11.265
2006	305	2091	17+4	15.85	1.3	38	1.41	11.265
2006	283	2106	17+1	12.61	1.03	23	1.12	11.265
2006	281	2108	17+6	12.88	1.06	36	1.14	11.265
2006	273	2116	17	10.32	0.85	38	0.92	11.265
2006	263	2122	17	13.72	1.12	40	1.22	11.265
2006	262	2123	17+3	12.05	0.99	40	1.07	11.265
2006	259	2126	17+2	7.48	0.61	35	0.66	11.265
2006	257	2128	17+4	13.11	1.07	18	1.16	11.265
2006	256	2129	17+2	9.01	0.74	30	0.80	11.265

2006	235	2147	17+4	8.3	0.68	36	0.74	11.265
2006	222	2157	17+1	11.92	0.98	24	1.06	11.265
2006	221	2158	17+5	10.78	0.88	38	0.96	11.265
2006	213	2163	17+2	12.24	1	29	1.09	11.265
2006	211	2165	17	20.77	1.7	33	1.84	11.265
2006	200	2173	17+4	8.21	0.67	35	0.73	11.265
2006	192	2179	17+2	7.57	0.62	24	0.67	11.265
2006	190	2181	17+5	8.85	0.73	35	0.79	11.265
2007	200	2204	17	15.21	1.25	33	1.35	11.265
2007	193	2211	17	12.72	1.04	39	1.13	11.265
2007	167	2229	17+4	6.9	0.57	42	0.61	11.265
2007	165	2231	17+1	15.66	1.28	38	1.39	11.265
2007	164	2232	17+6	16.8	1.38	37	1.49	11.265
2007	158	2236	17+6	15.89	1.3	38	1.41	11.265
2007	156	2238	17+2	14.58	1.19	33	1.29	11.265
2007	151	2242	17+6	7.72	0.63	29	0.69	11.265
2007	145	2248	17+2	11.12	0.91	38	0.99	11.265
2007	141	2251	17+6	8.74	0.72	36	0.78	11.265
2007	129	2262	17+4	11.27	0.92	38	1.00	11.265
2007	127	2264	17+3	13.81	1.13	39	1.23	11.265
2007	126	2265	17	15.99	1.31	38	1.42	11.265
2007	123	2268	17+5	12.17	1	41	1.08	11.265
2007	122	2269	17+2	20.93	1.72	27	1.86	11.265
2007	111	2272	17+2	11.09	0.91	39	0.98	11.265
2007	110	2273	17	12.75	1.05	40	1.13	11.265
2007	90	2285	17+6	13.12	1.08	39	1.16	11.265
2007	80	2291	17+6	8.27	0.68	33	0.73	11.265
2007	54	2312	17+3	9.38	0.77	37	0.83	11.265
2007	52	2313	17	9.73	0.8	20	0.86	11.265
2007	39	2325	17+6	11.3	0.39	41	1.00	11.265
2007	35	2329	17	11.57	0.95	38	1.03	11.265
2007	23	2339	17+2	7.94	0.65	39	0.70	11.265
2007	10	2349	17	14.2	1.16	22	1.26	11.265
2007	6	2353	17+2	9.23	0.76	40	0.82	11.265
2007	1	2358	17+3	11.67	0.96	42	1.04	11.265
2007	382	2378	17+2	7.9	0.65	42	0.70	11.265
2007	361	2395	17	8.6	0.7	37	0.76	11.265
2007	355	2399	17+4	8.8	0.72	36	0.78	11.265
2007	353	2400	17+3	7.21	0.59	36	0.64	11.265
2007	337	2413	17+1	10.76	0.88	36	0.96	11.265
2007	325	2421	17+3	8.34	0.68	37	0.74	11.265
2007	321	2424	17+3	10.14	0.83	40	0.90	11.265
2007	302	2441	17	10.85	0.89	37	0.96	11.265
2007	298	2445	17	15.89	1.3	39	1.41	11.265
2007	291	2451	17+2	10.92	0.89	39	0.97	11.265
2007	286	2455	17+2	11.82	0.97	38	1.05	11.265
2007	282	2458	17+2	11.26	0.92	33	1.00	11.265
2007	266	2469	17	10.41	0.85	40	0.92	11.265
2007	255	2479	17+2	12.72	1.04	29	1.13	11.265
2007	250	2483	17	16.4	1.34	39	1.46	11.265

2007	246	2487	17+6	16.81	1.38	43	1.49	11.265
2007	244	2489	17+1	12.01	0.98	35	1.07	11.265
2007	240	2493	17+4	6.64	0.54	26	0.59	11.265
2007	222	2510	17	11.36	0.93	29	1.01	11.265
2007	218	2514	17+6	7.3	0.6	36	0.65	11.265
2007	216	2516	17+6	11.57	0.95	35	1.03	11.265
2008	17416	2521	17+6	4.9	0.4	39	0.43	11.265
2008	17236	2527	17+1	13.4	1.1	42	1.19	11.265
2008	0732-17218	2529	17+3	12	0.98	40	1.07	11.265
2008	17179	2532	17+2	14.9	1.22	36	1.32	11.265
2008	17110	2540	17+2	14.4	1.18	34	1.28	11.265
2008	17005	2550	17+3	10.3	0.84	36	0.91	11.265
2008	16960	2553	17+1	7.2	0.59	36	0.64	11.265
2008	16904	2559	17	16.3	1.34	36	1.45	11.265
2008	16838	2566	17+6	10.7	0.88	36	0.95	11.265
2008	16829	2567	17+2	7.3	0.6	26	0.65	11.265
2008	16810	2571	17+1	11.3	0.92	31	1.00	11.265
2008	16662	2584	17+6	12	0.98	39	1.07	11.265
2008	16661	2585	17+2	5.7	0.47	40	0.51	11.265
2008	16357	2624	17+5	11.9	0.97	37	1.06	11.265
2008	16343	2626	17+4	11.9	0.97	40	1.06	11.265
2008	16292	2634	17+5	10.7	0.88	39	0.95	11.265
2008	16297	2635	17+6	10.1	0.83	41	0.90	11.265
2008	4	2643	17	12	0.98	34	1.07	11.265
2008	18487	2648	17+4	11.2	0.92	35	0.99	11.265
2008	18459	2652	17+6	9.3	0.77	23	0.83	11.265
2008	18411	2657	17	9.5	0.78	38	0.84	11.265
2008	18368	2661	17+1	12.7	1.04	40	1.13	11.265
2008	18299	2664	17	13.8	1.13	44	1.23	11.265
2008	17784	2710	17+3	10.5	0.86	37	0.93	11.265
2008	17508	2728	17+1	15.5	1.27	35	1.38	11.265
2008	17442	2730	17+5	8.7	0.71	46	0.77	11.265
2009	20386	2733	17+1	9.9	0.81	27	0.88	11.265
2009	20345	2735	17+5	8	0.65	32	0.71	11.265
2009	20286	2746	17	14	1.15	38	1.24	11.265
2009	20245	2748	17	14.9	1.22	27	1.32	11.265
2009	20227	2751	17+2	15.5	1.27	31	1.38	11.265
2009	20199	2753	17+1	12.4	1.02	44	1.10	11.265
2009	19975	2766	17+6	7.3	0.6	39	0.65	11.265
2009	19921	2770	17+1	11.3	0.93	30	1.00	11.265
2009	19894	2772	17+4	11.8	0.97	28	1.05	11.265
2009	19773	2776	17+2	8.8	0.72	38	0.78	11.265
2009	19649	2785	17+4	10.8	0.88	35	0.96	11.265
2009	19591	2786	17+6	10.9	0.89	28	0.97	11.265
2009	19563	2792	17+0	14	1.15	38	1.24	11.265
2009	19565	2793	17+3	17.4	1.42	39	1.54	11.265
2009	19418	2804	17+2	11.4	0.93	40	1.01	11.265
2009		2805	17+3	11.8	0.96	36	1.05	11.265
2009	19113	2821	17+6	12.4	1.02	31	1.10	11.265

2009	18809	2838	17+1	13.3	1.09	30	1.18	11.265
2009	18772	2845	17+0	11.8	0.97	30	1.05	11.265
2010	22718	2875	17+5	12	0.99	38	1.07	11.265
2010	22580	2883	17+6	8.7	0.71	38	0.77	11.265
2010		2884	17+2	16.5	1.35	31	1.46	11.265
2010	22307	2902	17+1	11.8	0.97	35	1.05	11.265
2010	22290	2904	17+2	19.7		38	1.75	11.265
2010	22270	2910	17+1	11.8	0.96	40	1.05	11.265
2010	22216	2914	17	15.6	1.27	36	1.38	11.265
2010	22134	2917	17	10.4	0.86	33	0.92	11.265
2010	22144	2921	17+1	11.4	0.93	40	1.01	11.265
2010	22038	2927	17+4	11	0.9	39	0.98	11.265
2010	21906	2934	17+6	8.7	0.71	31	0.77	11.265
2010	21888	2937	17+1	12.4	1.01	40	1.10	11.265
2010	21829	2939	17	13.9	1.14	30	1.23	11.265
2010	21621	2946	17+5	12.9	1.05	37	1.15	11.265
2010	21570	2947	17+6	13.9	1.14	37	1.23	11.265
2010	21465	2952	17+1	14.8	1.21	37	1.31	11.265
2010	21436	2956	17+4	11.9	0.97	37	1.06	11.265
2009	21048	2971	17+3	5.9	0.49	25	0.52	11.265
2009	20865	2981	17+4	11	0.9	36	0.98	11.265
2009	20787	2990	17+4	9.9	0.8	33	0.88	11.265
2009	20740	2992	17+2	83.3	6.87	28	7.39	11.265
2009	20565	2995	17	14.1	1.16	31	1.25	11.265
2009	20584	3001	17+3	15	1.23	33	1.33	11.265
2009	20602	3002	17+4	9.3	0.76	39	0.83	11.265
2009	20536	3005	17+2	8.7	0.71	35	0.77	11.265
2009	20467	3012	17+3	13.3	1.09	35	1.18	11.265
2010	23861	3020	17+5	12.3	1.01	30	1.09	11.265
2010	23817	3023	17+2	17.7	1.45	17	1.57	11.265
2010	23815	3024	17+4	12.4	1.01	36	1.10	11.265
2010	23793	3025	17+1	10.9	0.89	40	0.97	11.265
2010	23627	3034	17+1	9.5	0.78	35	0.84	11.265
2010	23090	3059	17+5	8.8	0.72	39	0.78	11.265
2010	23059	3061	17+2	10.3	0.84	38	0.91	11.265
2010	22932	3068	17+1	12.9	1.05	36	1.15	11.265
2010	22931	3069	17+3	18.8	1.54	37	1.67	11.265
2011		3084	17+3	5.68	0.47	36	0.50	11.265
2011	25206	3087	17+1	18.53	1.52	25	1.64	11.265
2011	25175	3091	17+1	55.59	4.56	34	4.93	11.265
2011	25035	3099	17+4	10.06	0.82	35	0.89	11.265
2011	25017	3101	17+0	11.92	0.98	40	1.06	11.265
2011	25003	3104	17	37.81	3.1	34	3.36	11.265
2011	24920	3111	17+2	9.84	0.81	39	0.87	11.265
2011		3119	17	15.7	1.29	26	1.39	11.265
2011	24794	3122	17+1	11.1	0.91	40	0.99	11.265
2011	24782	3123	17+2	12.7	1.04	35	1.13	11.265
2011	24709	3129	17+5	7.8	0.64	42	0.69	11.265
2011	24529	3144	17+2	8.1	0.66	34	0.72	11.265
2011	24465	3151	17+6	7.1	0.58	36	0.63	11.265

2011	24390	3159	17	17.76	1.46	36	1.58	11.265
2011	24408	3161	17+1	7	0.57	43	0.62	11.265
2011	24274	3169	17+3	9.82	0.8	37	0.87	11.265
2011	24199	3174	17+3	12.1	0.99	38	1.07	11.265
2011	24188	3176	17+2	14.9	1.16	37	1.32	11.265
2011	24098	3183	17+1	13.7	1.13	35	1.22	11.265
2011	24053	3186	17+4	16.5	1.35	24	1.46	11.265
2011	24019	3188	17+1	9.6	0.79	41	0.85	11.265
2012	1052	3192	17+4	7.12	0.58	36	0.63	11.265
2012	1059	3193	17+5	9.68	0.79	41	0.86	11.265
2012	930	3208	17+2	6.13	0.5	39	0.54	11.265
2012	889	3213	17+4	7.97	0.65	36	0.71	11.265
2012	883	3215	17+1	15.88	1.3	36	1.41	11.265
2012	784	3221	17+1	14.86	1.22	20	1.32	11.265
2012	738	3223	17	13.13	1.08	35	1.17	11.265
2012	504	3246	17+3	11.25	0.92	38	1.00	11.265
2012	J08-1666	3252	17	10.09	0.83	39	0.90	11.265
2012	395	3264	17+3	10.55	0.86	38	0.94	11.265

Tab 18 MoM of AFP in the 17th W.O.G

year	Amniotic Fluid	patient number	W.O.G	AFP	MoM of AFP, Giessen	maternal age	MoM of AFP, Jena	Median
2000	487	19	18+3	12.9	1.33		1.41	9.17
2000	447	35	18+1	10.5	1.08		1.15	9.17
2000	445	36	18+0	14.8	1.53		1.61	9.17
2000	425	51	18+3	9.7	1		1.06	9.17
2000	422	53	18+1	8.4	0.87		0.92	9.17
2000	368	72	18+3	8.6	0.88		0.94	9.17
2000	389	76	18+3	14.3	1.48		1.56	9.17
2000	390	77	18+4	5.2	0.54		0.57	9.17
2000	387	79	18+1	10.8	1.11		1.18	9.17
2000	338	94	18	11.5	0.97		1.25	9.17
2000	352	106	18+3	5.1	0.53		0.56	9.17
2000	327	114	18+4	9.3	0.9		1.01	9.17
2000	314	117	18+4	8.7	0.84		0.95	9.17
2000	292	130	18+2	12.1	1.17		1.32	9.17
2000	248	158	18+2	6.5	0.63	18	0.71	9.17
2000	231	167	18	10.1	0.98	26	1.10	9.17
2000	224	176	18+1	6.1	0.59	34	0.67	9.17
2000	199	192	18	8.6	0.83	36	0.94	9.17
2000	148	223	18	7.6	0.74	36	0.83	9.17
2000	112	235	18	9.7	0.82	27	1.06	9.17
2000	133	241	18	10.3	0.87	28	1.12	9.17
2000	79	260	18	9.7	0.82	28	1.06	9.17
2000	41	270	18+1	5.3	0.51	42	0.58	9.17
2000	40	274	18	10	0.97	35	1.09	9.17
2000	11	285	18	10	0.97	38	1.09	9.17

2001	246	299	18+2	15.02	1.55	21	1.64	9.17
2001	249	301	18+6	10.96	1.13	35	1.20	9.17
2001	258	312	18+1	5.06	0.52	29	0.55	9.17
2001	270	319	18+4	10.89	1.12	37	1.19	9.17
2001	216	329	18	13.4	1.38	24	1.46	9.17
2001	222	337	18+2	12.73	1.31	24	1.39	9.17
2001	205	347	18	16.78	1.46	41	1.83	9.17
2001	192	352	18+1	8.53	0.88	31	0.93	9.17
2001	186	357	18+1	15.5	1.6	32	1.69	9.17
2001	172	362	18	15.6	1.36	43	1.70	9.17
2001	169	367	18+4	9.55	0.98	31	1.04	9.17
2001	163	369	18+6	9.3	0.96	26	1.01	9.17
2001	161	371	18+1	8.53	0.88	35	0.93	9.17
2001	153	376	18+1	7.92	0.82	37	0.86	9.17
2001	141	383	18	15.07	1.55	30	1.64	9.17
2001	138	384	18+5	8.51	0.88	28	0.93	9.17
2001	124	396	18+1	6.85	0.71	35	0.75	9.17
2001	121	398	18+3	8.89	0.92	29	0.97	9.17
2001	120	401	18+5	8.14	0.84	35	0.89	9.17
2001	108	407	18+5	9.57	0.99	39	1.04	9.17
2001	93	409	18	19.94	1.73	36	2.17	9.17
2001	69	436	18+5	10.78	1.11	37	1.18	9.17
2001	63	441	18	12.74	1.31	38	1.39	9.17
2001	5	473	18+2	10.7	1.1	38	1.17	9.17
2001	525	487	18+1	9.3	0.92	36	1.01	9.17
2001	516	491	18+1	10.26	1.01	35	1.12	9.17
2001	503	500	18+3	8.69	0.86	35	0.95	9.17
2001	478	516	18	13.16	1.08	40	1.44	9.17
2001	465	519	18+3	7.12	0.7	27	0.78	9.17
2001	474	524	18+2	11.71	1.15	35	1.28	9.17
2001	452	539	18	11.68	1.15	23	1.27	9.17
2001	442	545	18+1	9.42	0.93	46	1.03	9.17
2001	441	546	18+0	8.26	0.81	37	0.90	9.17
2001	435	552	18+2	9.09	0.9	30	0.99	9.17
2001	420	562	18+5	2.42	0.24	30	0.26	9.17
2001	403	573	18+1	6.05	0.6	38	0.66	9.17
2001	383	581	18+4	6.06	0.6	26	0.66	9.17
2001	385	582	18+2	10.6	1.05	37	1.16	9.17
2001	369	591	18+1	9.03	0.89	36	0.98	9.17
2001	367	592	18	10.43	0.86	38	1.14	9.17
2001	350	600	18+4	22.23	2.19	19	2.42	9.17
2001	329	610	18+5	7.15	0.7	41	0.78	9.17
2001	310	621	18+3	10.38	1.02	34	1.13	9.17
2001	296	635	18+4	9.14	0.94	34	1.00	9.17
2001	273	645	18+3	21.88	2.26	26	2.39	9.17
2002	264	651	18+6	6.66	0.66	36	0.73	9.17
2002	245	665	18+3	10.04	0.99	34	1.09	9.17
2002	236	668	18+5	11.51	1.13	35	1.26	9.17
2002	224	675	18	10.24	0.84	35	1.12	9.17
2002	222	677	18	9.4	0.93	39	1.03	9.17

2002	208	686	18+1	8.27	0.82	40	0.90	9.17
2002	182	698	18+2	10.17	1	37	1.11	9.17
2002	185	701	18+5	43.82	4.32	26	4.78	9.17
2002	176	706	18+3	8.19	0.81	27	0.89	9.17
2002	164	720	18+6	9.77	0.96	31	1.07	9.17
2002	153	726	18+3	7.16	0.71	26	0.78	9.17
2002	146	731	18	11.77	1.16	24	1.28	9.17
2002	137	738	18	7.98	0.65	40	0.87	9.17
2002	124	751	18+0	11.56	1.14	42	1.26	9.17
2002	135	752	18	12.52	1.03	45	1.37	9.17
2002	112	763	18+1	8.14	0.8	37	0.89	9.17
2002	100	769	18+1	10.56	1.04	34	1.15	9.17
2002	102	777	18+3	7.05	0.7	35	0.77	9.17
2002	71	791	18	7.92	0.78	34	0.86	9.17
2002	32	809	18+2	7.94	0.78	35	0.87	9.17
2002	17	821	18+5	11.74	1.16	31	1.28	9.17
2002	20	829	18+2	9.71	0.96	28	1.06	9.17
2002	507	831	18+5	3.73	0.37	24	0.41	9.17
2002	499	837	18+6	11.52	1.14	24	1.26	9.17
2002	494	841	18	11.27	1.11	38	1.23	9.17
2002	490	842	18+4	12.47	1.23	41	1.36	9.17
2002	492	843	18+2	10.03	0.99	36	1.09	9.17
2002	444	851	18+2	10.27	1.01	35	1.12	9.17
2002	477	853	18+5	10.14	1.04	34	1.11	9.17
2002	475	855	18+5	7.13	0.7	31	0.78	9.17
2002	460	863	18	18.35	1.5	29	2.00	9.17
2002	453	869	18+2	9.94	0.98	21	1.08	9.17
2002	434	879	18	6.38	0.63	31	0.70	9.17
2002	412	889	18+1	13.55	1.34	39	1.48	9.17
2002	394	897	18+3	12.14	1.2	40	1.32	9.17
2002	360	918	18+3	10.67	1.05	31	1.16	9.17
2002	341	929	18+2	17.46	1.72	34	1.90	9.17
2002	334	933	18+2	11.7	1.15	29	1.28	9.17
2002	330	937	18+1	9.29	0.92	35	1.01	9.17
2002	326	939	18+2	5.59	0.55	34	0.61	9.17
2002	317	945	18+3	11.83	1.12	33	1.29	9.17
2002	314	949	18+3	11.31	1.12	23	1.23	9.17
2002	303	951	18+3	8.51	0.84	32	0.93	9.17
2002	294	961	18	12.07	0.99	22	1.32	9.17
2002	293	962	18+4	10.18	1	27	1.11	9.17
2002	292	963	18	9.14	0.9	35	1.00	9.17
2002	278	971	18	7.88	0.78	32	0.86	9.17
2002	280	972	18+4	9.17	0.9	23	1.00	9.17
2003	232	992	18+6	5.68	0.56	41	0.62	9.17
2003	200	1004	18+1	9.44	0.93	37	1.03	9.17
2003	137	1013	18+6	9.45	0.93	36	1.03	9.17
2003	144	1017	18+2	9.31	0.92	17	1.02	9.17
2003	149	1021	18+6	12.8	1.26	44	1.40	9.17
2003	162	1028	18+3	7.67	0.76	39	0.84	9.17
2003	104	1055	18+6	5.19	0.51	40	0.57	9.17

2003	52	1060	18+2	9.53	0.94	37	1.04	9.17
2003	60	1067	18+3	3.91	0.39	23	0.43	9.17
2003	69	1071	18+4	3.37	0.33	25	0.37	9.17
2003	77	1075	18+1	7.99	0.79	38	0.87	9.17
2003	79	1077	18+6	6.93	0.68	36	0.76	9.17
2003	29	1090	18	10.47	1.03	37	1.14	9.17
2003	6	1111	18+3	9.68	0.95	36	1.06	9.17
2003	2	1113	18+2	12.6	1.24	36	1.37	9.17
2003	508	1115	18+2	9.05	0.89	34	0.99	9.17
2003	477	1140	18+5	2.97	0.29	21	0.32	9.17
2003	457	1153	18+3	5.72	0.56	29	0.62	9.17
2003	442	1160	18	8.73	0.86	25	0.95	9.17
2003	414	1183	18+2	6.27	0.62	27	0.68	9.17
2003	393	1193	18+6	5.91	0.58	34	0.64	9.17
2003	337	1233	18+0	6.15	0.61	37	0.67	9.17
2003	321	1241	18	12.34	1.22	38	1.35	9.17
2003	299	1257	18+6	4.28	0.42	27	0.47	9.17
2003	276	1268	18+2	7.24	0.71	42	0.79	9.17
2004	201	1292	18+2	11.84	1.17	26	1.29	9.17
2004	195	1296	18+6	4.92	0.49	29	0.54	9.17
2004	176	1309	18+4	10.18	1	42	1.11	9.17
2004	173	1312	18+2	10.38	1.02	27	1.13	9.17
2004	158	1324	18+3	9.09	0.9	36	0.99	9.17
2004	155	1327	18+5	7.32	0.72	31	0.80	9.17
2004	150	1331	18+6	11.08	1.09	19	1.21	9.17
2004	136	1342	18+6	3.95	0.39	35	0.43	9.17
2004	131	1346	18+2	5.99	0.59	26	0.65	9.17
2004	128	1349	18+2	6.88	0.68	42	0.75	9.17
2004	127	1350	18+6	8.58	0.85	31	0.94	9.17
2004	115	1358	18+3	10.49	1.03	26	1.14	9.17
2004	64	1397	18	7.66	0.76	39	0.84	9.17
2004	61	1400	18	12.28	1.21	37	1.34	9.17
2004	45	1412	18	7.58	0.75	28	0.83	9.17
2004	29	1428	18	11.61	1.15	36	1.27	9.17
2004	27	1430	18+2	8.14	0.8	35	0.89	9.17
2004	26	1431	18	5.11	0.5	29	0.56	9.17
2004	3	1450	18+5	8.76	0.86	21	0.96	9.17
2004	424	1453	18+6	8.36	0.82	35	0.91	9.17
2004	410	1464	18+3	11.15	1.1	37	1.22	9.17
2004	404	1469	18+4	4.94	0.49	25	0.54	9.17
2004	402	1471	18	9.12	0.9	35	0.99	9.17
2004	396	1476	18+1	8.24	0.81	24	0.90	9.17
2004	342	1519	18+6	8.08	0.8	26	0.88	9.17
2004	341	1520	18	13.4	1.32	34	1.46	9.17
2004	272	1576	18+6	6.65	0.66	33	0.73	9.17
2004	249	1594	18+1	8.44	0.83	37	0.92	9.17
2004	239	1602	18+2	14.36	1.42	38	1.57	9.17
2004	226	1613	18+6	2.47	0.24	32	0.27	9.17
2004	225	1614	18+1	3.88	0.38	41	0.42	9.17
2004	220	1617	18+0	11.55	1.14	42	1.26	9.17

2005	191	1619	18+3	10.98	1.08	38	1.20	9.17
2005	186	1623	18+5	9.48	0.93	28	1.03	9.17
2005	185	1624	18	9.7	0.96	40	1.06	9.17
2005	127	1676	18+5	6.41	0.63	27	0.70	9.17
2005	47	1744	18	12.22	1.21	37	1.33	9.17
2005	43	1747	18+1	14.81	1.46	24	1.62	9.17
2005	35	1755	18+1	9.17	0.9	44	1.00	9.17
2005	31	1759	18+5	11.55	1.14	36	1.26	9.17
2005	29	1761	18+1	28.07	2.77	43	3.06	9.17
2005	20	1769	18	9.72	0.96	44	1.06	9.17
2005	343	1806	18+5	10.27	1.01	26	1.12	9.17
2005	334	1813	18+1	8.42	0.83	28	0.92	9.17
2005	285	1852	18+4	7.62	0.75	34	0.83	9.17
2005	278	1859	18+3	7.21	0.71	22	0.79	9.17
2005	277	1860	18+2	9.69	0.96	39	1.06	9.17
2005	270	1867	18	7.06	0.7	38	0.77	9.17
2005	268	1869	18+2	12.78	1.26	32	1.39	9.17
2005	250	1887	18+2	8.53	0.84	21	0.93	9.17
2005	207	1923	18	9.07	0.89	41	0.99	9.17
2006	156	1949	18+2	19.51	1.92	24	2.13	9.17
2006	141	1960	18+6	9.92	0.92	42	1.08	9.17
2006	123	1975	18+2	305.85	30.16	17	33.35	9.17
2006	119	1979	18+1	15.12	1.49	27	1.65	9.17
2006	115	1982	18+3	7.24	0.71	31	0.79	9.17
2006	96	1995	18+5	8.93	0.83	23	0.97	9.17
2006	86	2004	18+1	6.41	0.63	37	0.70	9.17
2006	50	2033	18+2	5.95	0.59	38	0.65	9.17
2006	32	2046	18+4	7.37	0.73	37	0.80	9.17
2006	17	2058	18+1	9.41	0.93	38	1.03	9.17
2006	329	2072	18+4	9.19	0.91	35	1.00	9.17
2006	260	2125	18+3	9.09	0.9	43	0.99	9.17
2006	250	2135	18+6	8.35	0.82	36	0.91	9.17
2006	198	2177	18+6	6.49	0.64	32	0.71	9.17
2006	193	2180	18+6	8.37	0.83	40	0.91	9.17
2007	191	2212	18+2	6.25	0.62	20	0.68	9.17
2007	144	2249	18	7.12	0.7	33	0.78	9.17
2007	86	2289	18+5	9.5	0.94	36	1.04	9.17
2007	68	2301	18+1	20.97	2.07	32	2.29	9.17
2007	388	2371	18	5.7	0.56	32	0.62	9.17
2007	370	2387	18	12	1.19	36	1.31	9.17
2007	359	2396	18+6	9.14	0.9	36	1.00	9.17
2007	317	2427	18+4	12.38	1.22	32	1.35	9.17
2007	308	2436	18+6	10.4	1.03	33	1.13	9.17
2007	307	2437	18+3	15.43	1.52	38	1.68	9.17
2007	303	2440	18	16.51	1.63	36	1.80	9.17
2007	300	2443	18+4	7.43	0.73	22	0.81	9.17
2007	297	2446	18+5	11.72	1.16	34	1.28	9.17
2007	296	2447	18	8.86	0.86	42	0.97	9.17
2007	294	2449	18+1	7.46	0.74	31	0.81	9.17
2007	283	2457	18+3	7.8	0.79	31	0.85	9.17

2007	281	2459	18+5	11.97	1.18	37	1.31	9.17
2007	276	2463	18	6.24	0.62	34	0.68	9.17
2007	258	2476	18+1	9.69	0.96	37	1.06	9.17
2007	239	2494	18	8.83	0.87	32	0.96	9.17
2007	226	2506	18	6.79	0.67	22	0.74	9.17
2007	225	2507	18+2	11.41	1.13	43	1.24	9.17
2008	17042	2545	18+2	8.7	0.86	35	0.95	9.17
2008	17015	2552	18+1	7.5	0.74	32	0.82	9.17
2008	16870	2561	18+5	6.5	0.64	26	0.71	9.17
2008	16820	2570	18+5	6.1	0.6	25	0.67	9.17
2008	315	2586	18	3.8	0.37	30	0.41	9.17
2008	16467	2610	18	11.9	1.17	38	1.30	9.17
2008	16477	2612	18+3	10.4	1.02	36	1.13	9.17
2008	16306	2630	18+5	8.1	0.8	25	0.88	9.17
2008	16285	2636	18+4	9.6	0.94	41	1.05	9.17
2008	8	2638	18+3	8.2	0.81	38	0.89	9.17
2008	18403	2659	18+2	10.2	1.01	25	1.11	9.17
2008	18194	2672	18+4	8.3	0.82	27	0.91	9.17
2008	18077	2683	18+3	7.7	0.76	34	0.84	9.17
2008	17988	2689	18+2	8.8	0.87	41	0.96	9.17
2008	17856	2699	18+0	7.3	0.72	43	0.80	9.17
2008	17847	2700	18+6	7.5	0.74	40	0.82	9.17
2008	17789	2707	18+6	9.7	0.96	42	1.06	9.17
2008	17788	2708	18+5	7	0.68	40	0.76	9.17
2008	17759	2717	18+1	12.4	1.22	35	1.35	9.17
2008	17644	2721	18+5	8	0.79	44	0.87	9.17
2008	17589	2725	18+4	12.1	1.19	42	1.32	9.17
2008	1748	2729	18+1	10	0.98	35	1.09	9.17
2009	20239	2750	18+3	7.5	0.73	36	0.82	9.17
2009	20109	2759	18+6	9.1	0.89	39	0.99	9.17
2009	20087	2763	18+6	6.3	0.62	36	0.69	9.17
2009	19714	2779	18+3	13.3	1.31	37	1.45	9.17
2009	19611	2789	18+4	6.1	0.6	40	0.67	9.17
2009	19451	2798	18+6	6.2	0.61	34	0.68	9.17
2009	19472	2799	18+1	9.1	0.9	37	0.99	9.17
2009	19445	2801	18+2	6.9	0.68	35	0.75	9.17
2009	19147	2819	18+6	10.1	0.99	36	1.10	9.17
2009	19148	2820	18+5	5.8	0.57	40	0.63	9.17
2009	19055	2824	18+4	6.7	0.66	38	0.73	9.17
2010	22845	2865	18+6	8.6	0.84	22	0.94	9.17
2010	22787	2870	18+6	9.8	0.97	26	1.07	9.17
2010		2874	18+0	15.2	1.5	44	1.66	9.17
2010	22584	2882	18	6.3	0.62	45	0.69	9.17
2010		2886	18+2	16.5	1.62	35	1.80	9.17
2010	22546	2887	18	10.3	1.02	26	1.12	9.17
2010	22522	2888	18+4	6.7	0.66	41	0.73	9.17
2010	22341	2898	18+2	6.7	0.66	28	0.73	9.17
2010	22232	2913	18+1	9.1	0.9	31	0.99	9.17
2010	22079	2923	18+2	8.6	0.85	45	0.94	9.17
2010	22083	2924	18+0	11.8	1.16	40	1.29	9.17

2010	21936	2930	18+2	6.7	0.66	37	0.73	9.17
2010	21871	2938	18+4	10.6	1.05	37	1.16	9.17
2010	21492	2950	18	9.2	0.91	33	1.00	9.17
2010	21408	2960	18+4	11.3	1.12	36	1.23	9.17
2010	21404	2961	18+3	7.3	0.72	42	0.80	9.17
2009	21203	2966	18	9.1	0.9	39	0.99	9.17
2009	21235	2967	18+2	6.2	0.61	32	0.68	9.17
2009	21186	2968	18+1	7	0.69	41	0.76	9.17
2009	21050	2972	18	10.9	1.8	37	1.19	9.17
2009	20986	2975	18+2	9.2	0.91	37	1.00	9.17
2009	20830	2982	18+4	11.4	1.12	25	1.24	9.17
2009	20822	2983	18+5	9	0.89	36	0.98	9.17
2009	20820	2984	18+3	13.7	1.35	40	1.49	9.17
2009	20795	2987	18+6	5	0.49	32	0.55	9.17
2009	20679	2996	18+2	10.1	1	37	1.10	9.17
2009	20535	3007	18	8.4	0.83	29	0.92	9.17
2009	20415	3015	18	8.4	0.83	39	0.92	9.17
2010	23639	3033	18	11.5	1.14	25	1.25	9.17
2010		3036	18	10.1	0.99	33	1.10	9.17
2010	23479	3041	18+4	14.5	1.43	38	1.58	9.17
2010	23443	3043	18+2	7.7	0.76	39	0.84	9.17
2010	23306	3048	18	11.5	1.13	30	1.25	9.17
2010	23100	3057	18+1	8.3	0.82	34	0.91	9.17
2010	22885	3071	18+4	15.1	1.48	22	1.65	9.17
2010	22878	3074	18	7.9	0.78	40	0.86	9.17
2011	25290	3076	18+6	11.92	1.18	32	1.30	9.17
2011	25276	3078	18	10.38	1.02	23	1.13	9.17
2011	25239	3082	18+2	8.74	0.86	26	0.95	9.17
2011	24825	3121	18+1	7.7	0.76	37	0.84	9.17
2011	24459	3154	18+1	7.5	0.74	33	0.82	9.17
2011	24361	3162	18+3	9.59	0.95	32	1.05	9.17
2011	24191	3175	18+4	148.9	14.68	40	16.24	9.17
2011	24100	3182	18+4	8.3	0.82	36	0.91	9.17
2012	1014	3191	18+5	10.51	1.04	44	1.15	9.17
2012	j12-0999	3199	18+6	4.63	0.46	37	0.50	9.17
2012	838	3218	18+5	7.19	0.71	23	0.78	9.17
2012	701	3231	18+0	10.11	1	36	1.10	9.17
2012	391	3235	18+6	18.6	1.9	33	2.03	9.17
2012	J09-1165	3275	18+4	8.9	0.88	40	0.97	9.17

Tab 19 MoM of AFP in the 18th W.O.G

year	Amniotic Fluid	patient number	W.O.G	AFP	MoM of AFP, Giessen	matern al age	MoM of AFP, Jena	Median
2000	480	23	19+0	7.2	0.88		0.97	7.41
2000	475	24	19+5	8.4	1.03		1.13	7.41
2000	409	63	19	6.2	0.64		0.84	7.41
2000	233	163	19	9.1	1.17	27	1.23	7.41

2000	240	165	19+6	6.7	0.86	35	0.90	7.41
2000	245	186	19+6	7.7	0.99	32	1.04	7.41
2000	203	189	19+4	4.4	0.56	25	0.59	7.41
2000	188	196	19	8.6	0.83	25	1.16	7.41
2000	142	222	19+6	6.5	0.83	28	0.88	7.41
2000	113	234	19+1	6.9	0.88	29	0.93	7.41
2000	108	243	19+6	7.1	0.91	35	0.96	7.41
2000	102	250	19+6	5.4	0.69	28	0.73	7.41
2000	42	277	19+2	6.7	0.86	40	0.90	7.41
2000	31	281	19+5	7.5	0.96	31	1.01	7.41
2000	29	283	19+4	4.6	0.59	36	0.62	7.41
2000	30	284	19+2	3.3	0.42	24	0.45	7.41
2000	2	292	19+2	10.3	1.32	44	1.39	7.41
2001	250	318	19	16.04	1.65	18	2.16	7.41
2001	243	325	19	12.7	1.55	30	1.71	7.41
2001	241	326	19+3	10.94	1.33	37	1.48	7.41
2001	247	327	19	7.26	0.75	23	0.98	7.41
2001	189	353	19	7.08	0.86	30	0.96	7.41
2001	188	354	19+3	6.84	0.83	18	0.92	7.41
2001	168	368	19+6	5.18	0.63	32	0.70	7.41
2001	160	373	19	9.06	0.93	22	1.22	7.41
2001	137	385	19	15.07	1.55	38	2.03	7.41
2001	125	394	19+2	8.91	1.2	26	1.20	7.41
2001	117	397	19+5	8.8	1.07	23	1.19	7.41
2001	114	403	19+5	7.6	0.93	39	1.03	7.41
2001	110	404	19+2	7.54	0.92	21	1.02	7.41
2001	86	424	19	27.1	2.79	35	3.66	7.41
2001	84	428	19+2	7.69	0.94	38	1.04	7.41
2001	70	437	19+5	6.89	0.84	31	0.93	7.41
2001	66	442	19+4	8.54	1.04	34	1.15	7.41
2001	68	444	19+6	10.83	1.32	38	1.46	7.41
2001	48	453	19	9.46	1.15	26	1.28	7.41
2001	43	456	19+1	14.21	1.73	36	1.92	7.41
2001	25	468	19+4	10.07	1.23	38	1.36	7.41
2001	533	488	19+4	8.41	1.01	25	1.13	7.41
2001	532	489	19+6	5.64	0.68	25	0.76	7.41
2001	494	505	19+6	11.73	1.41	36	1.58	7.41
2001	481	515	19+2	7.1	0.85	36	0.96	7.41
2001	472	527	19+6	6.84	0.82	32	0.92	7.41
2001	461	531	19+3	12.15	1.46	35	1.64	7.41
2001	439	548	19+4	10.97	1.32	32	1.48	7.41
2001	433	553	19+5	7.21	0.87	22	0.97	7.41
2001	429	555	19+3	9.42	1.13	23	1.27	7.41
2001	410	569	19	7.48	0.9	39	1.01	7.41
2001	397	576	19+6	9.62	1.16	25	1.30	7.41
2001	375	588	19+6	5.55	0.67	35	0.75	7.41
2001	342	605	19+5	12.05	1.45	38	1.63	7.41
2001	335	606	19+4	6.43	0.77	30	0.87	7.41
2001	311	622	19+0	7.64	0.92	23	1.03	7.41
2001	301	627	19+6	5.51	0.67	18	0.74	7.41

2001	300	631	19+1	6.46	0.79	36	0.87	7.41
2001	295	634	19+1	5.21	0.64	28	0.70	7.41
2001	282	642	19	15.68	1.91	30	2.12	7.41
2002	244	663	19+6	8.94	1.07	32	1.21	7.41
2002	243	664	19	14.94	1.79	23	2.02	7.41
2002	218	680	19+1	9.71	1.17	32	1.31	7.41
2002	174	713	19+3	9.44	1.13	21	1.27	7.41
2002	159	722	19+3	12.75	1.53	37	1.72	7.41
2002	149	729	19	11.53	1.14	24	1.56	7.41
2002	138	737	19+4	5.06	0.61	34	0.68	7.41
2002	115	754	19+5	6.11	0.73	28	0.82	7.41
2002	111	760	19+2	7.34	0.88	30	0.99	7.41
2002	109	762	19+2	6.62	0.8	33	0.89	7.41
2002	86	775	19+5	6.93	0.83	34	0.94	7.41
2002	53	779	19+3	16.75	2.01	30	2.26	7.41
2002	44	800	19+5	11.76	1.41	36	1.59	7.41
2002	42	806	19+4	11.13	1.34	34	1.50	7.41
2002	27	812	19+6	7.54	0.9	30	1.02	7.41
2002	4	815	19+6	4.8	0.58	37	0.65	7.41
2002	505	832	19+2	3.87	0.46	28	0.52	7.41
2002	491	844	19	10.27	1.23	35	1.39	7.41
2002	470	857	19+2	10.97	1.32	35	1.48	7.41
2002	484	874	19+5	9.38	1.13	30	1.27	7.41
2002	445	877	19+2	9.67	1.16	23	1.30	7.41
2002	393	900	19+4	6.45	0.77	20	0.87	7.41
2002	375	912	19	8.34	1	41	1.13	7.41
2002	363	917	19	10.28	1.23	27	1.39	7.41
2002	342	930	19+1	8.36	1	37	1.13	7.41
2002	324	940	19+1	7.25	0.87	31	0.98	7.41
2002	282	968	19+6	4.16	0.5	27	0.56	7.41
2003	225	997	19+2	5.12	0.61	39	0.69	7.41
2003	192	1007	19+6	181.02	21.73	17	24.43	7.41
2003	184	1011	19+6	6.59	0.79	23	0.89	7.41
2003	169	1031	19+6	5.47	0.66	39	0.74	7.41
2003	181	1036	19+3	6.99	0.84	26	0.94	7.41
2003	116	1049	19+3	4.62	0.55	33	0.62	7.41
2003	27	1098	19+2	7.69	0.92	31	1.04	7.41
2003	21	1102	19+6	6.11	0.73	35	0.82	7.41
2003	506	1117	19+3	6.64	0.78	28	0.90	7.41
2003	485	1133	19+4	6.95	0.83	16	0.94	7.41
2003	476	1142	19+3	11.91	1.43	32	1.61	7.41
2003	461	1150	19+3	6.99	0.84	25	0.94	7.41
2003	432	1167	19+1	5.28	0.63	33	0.71	7.41
2003	428	1171	19+6	3.7	0.44	25	0.50	7.41
2003	415	1182	19+4	5.3	0.64	30	0.72	7.41
2003	410	1184	19+4	5.27	0.63	27	0.71	7.41
2003	386	1197	19+1	5.88	0.71	23	0.79	7.41
2003	370	1211	19+5	3.94	0.47	22	0.53	7.41
2003	360	1218	19+5	3.11	0.37	34	0.42	7.41
2003	300	1256	19	7.81	0.94	40	1.05	7.41

2004	218	1278	19+1	6.56	0.79	32	0.89	7.41
2004	208	1288	19+4	3.8	0.46	38	0.51	7.41
2004	189	1301	19+4	4.33	0.52	30	0.58	7.41
2004	181	1306	19+1	17.27	2.07	23	2.33	7.41
2004	145	1336	19+6	148.61	17.84	24	20.06	7.41
2004	123	1353	19+3	3.9	0.47	37	0.53	7.41
2004	103	1366	19	9.05	1.09	28	1.22	7.41
2004	88	1376	19	8.6	1.03	29	1.16	7.41
2004	86	1378	19	6.08	0.73	26	0.82	7.41
2004	83	1381	19+6	5.73	0.69	37	0.77	7.41
2004	69	1392	19+6	4.25	0.51	36	0.57	7.41
2004	63	1398	19+4	7.52	0.9	30	1.01	7.41
2004	60	1401	19+6	7.85	0.94	42	1.06	7.41
2004	55	1403	19+6	5.71	0.69	15	0.77	7.41
2004	42	1415	19+5	4.38	0.53	33	0.59	7.41
2004	37	1420	19+6	6.49	0.78	30	0.88	7.41
2004	30	1427	19+2	9.11	1.09	32	1.23	7.41
2004	14	1442	19+2	4.23	0.51	28	0.57	7.41
2004	425	1452	19+6	7.57	0.91	26	1.02	7.41
2004	422	1455	19+5	5.93	0.71	34	0.80	7.41
2004	419	1456	19+6	9.74	1.17	22	1.31	7.41
2004	418	1457	19+1	6.65	0.8	35	0.90	7.41
2004	403	1470	19	7.8	0.93	25	1.05	7.41
2004	371	1496	19+5	5.73	0.69	35	0.77	7.41
2004	358	1504	19+6	4.33	0.52	20	0.58	7.41
2004	349	1512	19+5	9.93	1.19	24	1.34	7.41
2004	322	1537	19+6	5.82	0.7	27	0.79	7.41
2004	284	1567	19+6	6.26	0.75	38	0.84	7.41
2004	276	1573	19+1	6.69	0.8	22	0.90	7.41
2004	254	1589	19+5	7.91	0.95	32	1.07	7.41
2004	252	1591	19+3	6.36	0.76	21	0.86	7.41
2004	244	1598	19+3	7.15	0.86	40	0.96	7.41
2005	179	1630	19+4	12.23	1.47	34	1.65	7.41
2005	172	1636	19+4	8.59	1.03	35	1.16	7.41
2005	160	1648	19	7.88	0.95	36	1.06	7.41
2005	152	1655	19+4	4.43	0.53	26	0.60	7.41
2005	134	1669	19+2	5.28	0.63	32	0.71	7.41
2005	125	1678	19+2	12.99	1.56	33	1.75	7.41
2005	120	1682	19+4	7.83	0.94	34	1.06	7.41
2005	112	1690	19+3	6.87	0.82	34	0.93	7.41
2005	108	1693	19+4	8.01	0.96	34	1.08	7.41
2005	96	1704	19+6	8.03	0.96	24	1.08	7.41
2005	83	1715	19+4	10.13	1.24	28	1.37	7.41
2005	77	1719	19+1	7.9	0.95	23	1.07	7.41
2005	72	1722	19+1	5.86	0.7	41	0.79	7.41
2005	68	1726	19+3	4.24	0.51	25	0.57	7.41
2005	63	1730	19+1	7.01	0.84	38	0.95	7.41
2005	58	1735	19	7.27	0.87	39	0.98	7.41
2005	51	1740	19	14.01	1.68	40	1.89	7.41
2005	45	1745	19+2	11.78	1.41	36	1.59	7.41

2005	33	1757	19+3	4.24	0.51	44	0.57	7.41
2005	22	1767	19+3	6.35	0.76	41	0.86	7.41
2005	365	1788	19+5	11.16	1.34	23	1.51	7.41
2005	353	1798	19+6	7.38	0.89	36	1.00	7.41
2005	352	1799	19+3	4.78	0.57	33	0.65	7.41
2005	345	1804	19+3	5.76	0.69	39	0.78	7.41
2005	314	1826	19+5	6.27	0.75	37	0.85	7.41
2005	298	1841	19+3	9.32	1.12	30	1.26	7.41
2005	289	1848	19+4	4.06	0.49	28	0.55	7.41
2005	288	1849	19+2	7.41	0.89	21	1.00	7.41
2005	274	1863	19+1	9.26	1.11	31	1.25	7.41
2005	273	1864	19+4	7.09	0.85	32	0.96	7.41
2005	258	1880	19+5	5.65	0.68	35	0.76	7.41
2005	243	1892	19	8.79	1.05	22	1.19	7.41
2005	232	1903	19+1	7.24	0.87	37	0.98	7.41
2006	164	1941	19	4.04	0.49	20	0.55	7.41
2006	152	1952	19+1	3.8	0.46	34	0.51	7.41
2006	138	1972	19+5	8.75	1.05	28	1.18	7.41
2006	113	1984	19+4	9.95	1.19	36	1.34	7.41
2006	110	1986	19+3	4.88	0.59	33	0.66	7.41
2006	100	1992	19+6	3.35	0.4	24	0.45	7.41
2006	85	2005	19+4	10.48	1.26	28	1.41	7.41
2006	79	2006	19+2	7.89	0.95	40	1.06	7.41
2006	74	2014	19	5.98	0.72	35	0.81	7.41
2006	72	2016	19+5	4.93	0.59	35	0.67	7.41
2006	64	2023	19+0	9.17	1.1	29	1.24	7.41
2006	62	2025	19+2	9	1.08	38	1.21	7.41
2006	19	2056	19+6	4.51	0.54	39	0.61	7.41
2006	318	2079	19+6	8.33	1	26	1.12	7.41
2006	315	2082	19+6	8.36	1	25	1.13	7.41
2006	288	2102	19+6	8.27	0.99	36	1.12	7.41
2006	276	2113	19+3	7.92	0.95	25	1.07	7.41
2006	275	2114	19	10.51	1.26	35	1.42	7.41
2006	272	2117	19+1	6.89	0.83	31	0.93	7.41
2006	228	2153	19+6	4.27	0.51	24	0.58	7.41
2006	227	2154	19	6.81	0.82	27	0.92	7.41
2006	203	2171	19+2	10.22	1.23	36	1.38	7.41
2006	188	2185	19+3	6.79	0.82	35	0.92	7.41
2006	177	2193	19	7.34	0.88	29	0.99	7.41
2007	190	2213	19	8.95	1.07	25	1.21	7.41
2007	182	2219	19	8.05	0.97	28	1.09	7.41
2007	177	2223	19	7.95	0.95	34	1.07	7.41
2007	175	2224	19+5	8.35	1	23	1.13	7.41
2007	148	2245	19+1	6.54	0.79	29	0.88	7.41
2007	143	2250	19+1	7.04	0.84	28	0.95	7.41
2007	139	2253	19+3	8.43	1.01	38	1.14	7.41
2007	84	2290	19	8.24	0.99	38	1.11	7.41
2007	78	2293	19+6	17.54	2.11	24	2.37	7.41
2007	63	2305	19+1	3.71	0.45	33	0.50	7.41
2007	59	2307	19+4	5.18	0.62	35	0.70	7.41

2007	45	2320	19+5	11.06	1.33	26	1.49	7.41
2007	38	2326	19+6	5.07	0.61	24	0.68	7.41
2007	37	2327	19+1	13.2	1.58	36	1.78	7.41
2007	25	2337	19+4	25.1	3.1	24	3.39	7.41
2007	406	2361	19	11.3	1.36	41	1.52	7.41
2007	407	2364	19+2	6.8	0.81	22	0.92	7.41
2007	380	2380	19+4	6.5	0.77	23	0.88	7.41
2007	336	2414	19+5	9.75	1.17	31	1.32	7.41
2007	313	2431	19+6	7.81	0.94	36	1.05	7.41
2007	305	2439	19+1	6.68	0.8	32	0.90	7.41
2007	299	2444	19+6	8.85	1.06	37	1.19	7.41
2007	288	2453	19	5.48	0.66	25	0.74	7.41
2007	277	2462	19	5.5	0.66	34	0.74	7.41
2007	273	2465	19+1	6.01	0.72	24	0.81	7.41
2007	254	2480	19+6	7.41	0.89	35	1.00	7.41
2007	252	2481	19+4	4.95	0.59	25	0.67	7.41
2007	236	2497	19+3	7.4	0.89	21	1.00	7.41
2007	235	2498	19+2	7.8	0.94	27	1.05	7.41
2008	17402	2522	19+3	4.3	0.52	39	0.58	7.41
2008	17393	2523	19+5	4.2	0.5	28	0.57	7.41
2008	17180	2531	19	13.5	1.62	22	1.82	7.41
2008	17139	2535	19+3	6.8	0.81	34	0.92	7.41
2008	17132	2536	19+1	7.7	0.93	34	1.04	7.41
2008	17033	2546	19+3	7.1	0.86	33	0.96	7.41
2008	16	2598	19+1	9.6	1.16	30	1.30	7.41
2008	16560	2600	19+6	6.2	0.74	27	0.84	7.41
2008	16315	2628	19+3	8.9	1.06	37	1.20	7.41
2008	16305	2633	19+3	7.3	0.87	21	0.99	7.41
2008	6	2641	19+1	8.1	0.98	34	1.09	7.41
2008	1	2646	19+3	5.1	0.6	35	0.69	7.41
2008	18495	2649	19	10.6	1.27	36	1.43	7.41
2008	18466	2650	19+6	5.5	0.66	29	0.74	7.41
2008	18003	2687	19+2	12.4	1.48	39	1.67	7.41
2009	20108	2758	19+6	9.1	1.09	43	1.23	7.41
2009	20069	2762	19+1	7.4	0.89	37	1.00	7.41
2009	19899	2774	19+4	4.1	0.49	37	0.55	7.41
2009	19588	2791	19+2	4.1	0.49	25	0.55	7.41
2009	18658	2852	19+3	4.9	0.59	30	0.66	7.41
2009	18627	2858	19+3	9.5	1.14	35	1.28	7.41
2010	22849	2864	19+3	8.2	0.98	36	1.11	7.41
2010	22788	2871	19+6	8.1	0.97	30	1.09	7.41
2010	22417	2891	19+2	9.3	1.11	36	1.26	7.41
2010	22184	2916	19+6	8.1	0.97	29	1.09	7.41
2010	22130	2919	19+3	6.6	0.79	24	0.89	7.41
2010	22051	2926	19+3	5.2	0.62	21	0.70	7.41
2010	21844	2940	19+3	9.1	1.1	26	1.23	7.41
2010	21820	2942	19	17	2.04	25	2.29	7.41
2010	21648	2945	19	10.4	1.25	38	1.40	7.41
2009	20719	2993	19	11.5	1.38	29	1.55	7.41
2009		2999	19	11.5	1.38	29	1.55	7.41

2010	23989	3016	19+5	8.5	1.02	31	1.15	7.41
2010	23866	3022	19+2	5.9	0.71	36	0.80	7.41
2010	23592	3037	19+3	8.1	0.97	30	1.09	7.41
2010	23026	3065	19+4	7.3	0.88	37	0.99	7.41
2011	25284	3077	19+3	9.33	1.12	31	1.26	7.41
2011	25174	3090	19+4	6.62	0.79	37	0.89	7.41
2011	24990	3102	19+1	11.15	1.34	31	1.50	7.41
2011	24877	3116	19+4	4.6	0.55	35	0.62	7.41
2011	24781	3124	19+1	10.1	1.21	36	1.36	7.41
2011	24456	3153	19+4	5.7	0.69	28	0.77	7.41
2011	24293	3167	19+5	7.26	0.87	40	0.98	7.41
2011	24258	3172	19+4	11.7	1.41	37	1.58	7.41
2011	24112	3181	19+2	8.1	0.97	29	1.09	7.41
2011	24072	3184	19	7.5	0.89	42	1.01	7.41
2012	987	3195	19+5	6.54	0.79	45	0.88	7.41
2012	986	3203	19	7.62	0.91	37	1.03	7.41
2012	837	3205	19+9	4.87	0.58	39	0.66	7.41
2012	839	3219	19	9.15	1.1	35	1.23	7.41
2012	613	3238	19+6	23.65	2.84	30	3.19	7.41
2012	428	3259	19+2	6.68	0.8	36	0.90	7.41
2012	396	3263	19+6	5.96	0.72	37	0.80	7.41

Tab 20 MoM of AFP in the 19th W.O.G

year	Amniotic Fluid	patient number	W.O.G	AFP	MoM of AFP, Giessen	maternal age	MoM of AFP, Jena	Median
2000	495	12	20+1	4.6	0.66		0.85	5.42
2000	476	22	20+1	8.1	1.16		1.49	5.42
2000	461	26	20+1	8.3	1.18		1.53	5.42
2000	448	38	20	5.7	0.7	40	1.05	5.42
2000	423	52	20+3	7.7	1.1		1.42	5.42
2000	407	64	20+2	8.5	1.22		1.57	5.42
2000	375	71	20+2	9.1	1.29		1.68	5.42
2000	388	78	20+4	4.1	0.58	34	0.76	5.42
2000	379	80	20+1	8.7	1.24		1.61	5.42
2000	386	81	20+5	3.8	0.64		0.70	5.42
2000	376	98	20+0	7.1	1.01		1.31	5.42
2000	357	103	20+6	6.5	0.93		1.20	5.42
2000	355	105	20+4	3.8	0.54		0.70	5.42
2000	311	125	20+3	3.7	0.51		0.68	5.42
2000	308	127	20+5	5.5	0.76		1.01	5.42
2000	275	143	20+0	3.9	0.54		0.72	5.42
2000	266	156	20	7.4	0.95	40	1.37	5.42
2000	249	159	20+4	5.3	0.74	22	0.98	5.42
2000	239	164	20+5	4.8	0.67	33	0.89	5.42
2000	202	190	20+2	6.9	0.96	22	1.27	5.42
2000	189	197	20+1	3.6	0.5	39	0.66	5.42
2000	178	199	20+3	4	0.56	20	0.74	5.42

2000	177	199	20+3	0.74	0.1	20	0.14	5.42
2000	170	203	20+6	5.4	0.75	20	1.00	5.42
2000	167	207	20+2	5.9	0.82	35	1.09	5.42
2000	155	212	20	8.7	1.21	29	1.61	5.42
2000	157	213	20+2	4.4	0.61	28	0.81	5.42
2000	156	215	20	8.8	1.13	33	1.62	5.42
2000	168	216	20	6.2	0.86	31	1.14	5.42
2000	135	229	20	4.7	0.65	34	0.87	5.42
2000	101	247	20+5	3.9	0.54	27	0.72	5.42
2000	95	253	20+5	6.2	0.86	30	1.14	5.42
2000	36	271	20+5	7.7	1.07	34	1.42	5.42
2000	19	290	20+4	3.1	0.4	39	0.57	5.42
2001	247	300	20+5	5.73	0.82	36	1.06	5.42
2001	263	306	20+3	6.73	0.96	37	1.24	5.42
2001	260	308	20+5	6.56	0.94	29	1.21	5.42
2001	255	309	20+1	7.46	1.07	32	1.38	5.42
2001	232	321	20+3	3.63	0.52	35	0.67	5.42
2001	218	338	20	12.55	1.79	35	2.32	5.42
2001	210	340	20+3	6.23	0.89	31	1.15	5.42
2001	204	348	20+3	5.41	0.77	35	1.00	5.42
2001	187	355	20+6	12.58	1.8	35	2.32	5.42
2001	170	365	20+4	6.75	0.96	31	1.25	5.42
2001	150	377	20	15.27	1.86	38	2.82	5.42
2001	147	381	20	8.44	1.21	34	1.56	5.42
2001	119	402	20+6	4.38	0.62	23	0.81	5.42
2001	87	425	20	6.06	0.86	24	1.12	5.42
2001	71	434	20	6.36	0.91	30	1.17	5.42
2001	55	450	20+1	10.41	1.49	36	1.92	5.42
2001	28	466	20+1	8.23	1.18	36	1.52	5.42
2001	527	485	20+1	3.94	0.58	25	0.73	5.42
2001	505	499	20+6	5.33	0.78	34	0.98	5.42
2001	492	506	20+4	6.78	1	31	1.25	5.42
2001	493	507	20+3	4.68	0.69	32	0.86	5.42
2001	486	513	20+5	4.96	0.73	23	0.92	5.42
2001	463	520	20+6	4.83	0.71	20	0.89	5.42
2001	463	522	20+6	4.83	0.71	20	0.89	5.42
2001	428	556	20	23.87	3.51	34	4.40	5.42
2001	423	559	20+1	3.48	0.51	34	0.64	5.42
2001	419	560	20+2	3.41	0.5	36	0.63	5.42
2001	414	566	20+1	3.74	0.55	27	0.69	5.42
2001	407	568	20	6.77	1	36	1.25	5.42
2001	392	578	20+5	5.29	0.78	27	0.98	5.42
2001	362	594	20+5	2.56	0.58	41	0.47	5.42
2001	358	597	20+2	4.65	0.68	33	0.86	5.42
2001	357	598	20+3	9.99	1.47	23	1.84	5.42
2001	330	609	20+6	5.13	0.75	19	0.95	5.42
2001	306	624	20+2	6.43	0.92	29	1.19	5.42
2001	294	633	20+6	4.95	0.71	27	0.91	5.42
2001	286	639	20+5	4.32	0.62	32	0.80	5.42
2001	275	644	20+3	3.67	0.52	30	0.68	5.42

2002	261	655	20	6.47	0.95	36	1.19	5.42
2002	255	657	20+3	5.48	0.81	33	1.01	5.42
2002	251	661	20+2	5.25	0.77	37	0.97	5.42
2002	250	662	20+3	3.73	0.55	35	0.69	5.42
2002	225	673	20+2	6.85	1.01	34	1.26	5.42
2002	210	683	20+4	5.53	0.81	25	1.02	5.42
2002	183	707	20+3	5.22	0.77	25	0.96	5.42
2002	169	714	20+2	4.5	0.66	37	0.83	5.42
2002	165	719	20+6	6.99	1.03	27	1.29	5.42
2002	154	723	20+1	4.72	0.69	33	0.87	5.42
2002	128	747	20	5.77	0.85	20	1.06	5.42
2002	119	753	20+3	4.32	0.64	35	0.80	5.42
2002	117	756	20+6	5.66	0.83	32	1.04	5.42
2002	114	758	20	4.56	0.67	36	0.84	5.42
2002	97	771	20+1	7.01	1.03	42	1.29	5.42
2002	56	781	20+6	5.99	0.88	19	1.11	5.42
2002	60	782	20+2	6.11	0.9	37	1.13	5.42
2002	76	785	20+3	5.96	0.88	24	1.10	5.42
2002	66	794	20+5	5.11	0.75	20	0.94	5.42
2002	45	803	20	13.99	2.06	31	2.58	5.42
2002	31	810	20+1	20.2	2.97	25	3.73	5.42
2002	16	823	20+6	4.05	0.6	35	0.75	5.42
2002	483	848	20+4	3.49	0.51	34	0.64	5.42
2002	473	856	20+2	4.07	0.6	29	0.75	5.42
2002	456	864	20+6	7.74	1.14	35	1.43	5.42
2002	449	868	20+4	4.72	0.69	30	0.87	5.42
2002	436	878	20+1	4.79	0.7	22	0.88	5.42
2002	416	885	20+3	4.65	0.68	35	0.86	5.42
2002	406	894	20+4	8.11	1.19	20	1.50	5.42
2002	391	899	20+3	7.59	1.12	22	1.40	5.42
2002	386	903	20+1	5.87	0.86	23	1.08	5.42
2002	381	905	20	4.46	0.66	31	0.82	5.42
2002	338	931	20+6	8.82	1.3	32	1.63	5.42
2002	331	935	20	4.53	0.67	35	0.84	5.42
2002	327	938	20	4.88	0.72	21	0.90	5.42
2002	322	942	20+1	8.16	1.2	39	1.51	5.42
2002	321	944	20+5	5.99	0.88	24	1.11	5.42
2002	318	946	20+3	4.3	0.63	36	0.79	5.42
2002	290	965	20+2	4.15	0.61	35	0.77	5.42
2002	279	970	20	9.81	1.44	38	1.81	5.42
2003	250	981	20+1	6.41	0.94	42	1.18	5.42
2003	244	983	20+6	6.24	0.92	35	1.15	5.42
2003	183	1012	20+3	4.73	0.7	38	0.87	5.42
2003	167	1030	20+5	5.9	0.87	43	1.09	5.42
2003	135	1038	20+2	4.62	0.68	35	0.85	5.42
2003	128	1041	20+3	3.94	0.58	25	0.73	5.42
2003	125	1043	20+3	5.57	0.82	37	1.03	5.42
2003	120	1044	20	4.71	0.69	39	0.87	5.42
2003	53	1063	20+2	10.56	1.55	34	1.95	5.42
2003	59	1066	20	4.95	0.73	38	0.91	5.42

2003	91	1082	20+1	4.9	0.72	35	0.90	5.42
2003	39	1094	20+5	5.96	0.88	25	1.10	5.42
2003	36	1095	20+6	4.02	0.59	39	0.74	5.42
2003	32	1096	20+4	5.66	0.83	29	1.04	5.42
2003	25	1100	20	11.58	1.39	32	2.14	5.42
2003	505	1118	20+6	8.09	1.19	42	1.49	5.42
2003	498	1125	20+6	1.94	0.28	29	0.36	5.42
2003	489	1131	20+3	4.6	0.68	34	0.85	5.42
2003	462	1149	20+2	3.23	0.48	37	0.60	5.42
2003	449	1157	20	4.04	0.59	18	0.75	5.42
2003	435	1164	20	18	0.96	32	3.32	5.42
2003	422	1176	20+3	3.62	0.53	25	0.67	5.42
2003	406	1188	20+3	2.64	0.39	39	0.49	5.42
2003	382	1200	20+6	5	0.74	30	0.92	5.42
2003	377	1205	20+4	4.06	0.6	26	0.75	5.42
2003	374	1207	20+6	2.52	0.37	31	0.46	5.42
2003	372	1209	20+6	7.04	0.58	27	1.30	5.42
2003	369	1212	20+1	3.61	0.53	21	0.67	5.42
2003	338	1232	20+5	3.9	0.57	21	0.72	5.42
2003	289	1263	20+4	5.03	0.74	19	0.93	5.42
2003	285	1267	20+3	4.36	0.64	32	0.80	5.42
2003	277	1272	20+6	3.56	0.52	21	0.66	5.42
2003	260	1276	20+1	4.44	0.65	24	0.82	5.42
2004	215	1281	20+4	3.24	0.48	31	0.60	5.42
2004	209	1287	20+2	2.57	0.38	19	0.47	5.42
2004	205	1291	20+4	2.35	0.35	18	0.43	5.42
2004	186	1303	20+4	5.42	0.8	25	1.00	5.42
2004	174	1310	20+5	0.57	0.08	29	0.11	5.42
2004	175	1311	20+5	1.06	0.16	29	0.20	5.42
2004	165	1318	20+6	3.68	0.54		0.68	5.42
2004	161	1322	20+2	6.83	1	33	1.26	5.42
2004	153	1328	20+4	4.05	0.6	33	0.75	5.42
2004	138	1340	20+3	10.15	1.49	37	1.87	5.42
2004	126	1351	20+2	3.96	0.58	24	0.73	5.42
2004	125	1351	20+2	5.76	0.85	24	1.06	5.42
2004	112	1361	20+2	3.37	0.5	36	0.62	5.42
2004	106	1364	20+3	9.01	1.32	34	1.66	5.42
2004	105	1365	20+2	4.64	0.68	29	0.86	5.42
2004	95	1372	20	6.8	1	29	1.25	5.42
2004	92	1375	20	5.51	0.81	29	1.02	5.42
2004	73	1388	20+3	4.57	0.67	37	0.84	5.42
2004	72	1389	20+5	3.2	0.47	41	0.59	5.42
2004	62	1399	20+6	5.14	0.76	31	0.95	5.42
2004	36	1421	20	6.8	1.36	32	1.25	5.42
2004	32	1425	20+3	5.16	0.76	23	0.95	5.42
2004	9	1445	20+6	6.2	0.91	30	1.14	5.42
2004	405	1468	20+2	5.93	0.87	27	1.09	5.42
2004	395	1477	20+5	8.73	1.3	34	1.61	5.42
2004	387	1482	20+2	4.63	0.68	27	0.85	5.42
2004	385	1483	20+5	4.23	0.62	23	0.78	5.42

2004	378	1489	20	6.44	0.95	23	1.19	5.42
2004	367	1498	20+2	6.93	1.02	23	1.28	5.42
2004	351	1510	20+2	7.01	1.03	28	1.29	5.42
2004	343	1518	20+3	17.08	2.51	25	3.15	5.42
2004	336	1524	20+4	8.03	1.18	20	1.48	5.42
2004	323	1536	20+6	6.09	0.9	21	1.12	5.42
2004	278	1572	20+1	14.38	2.11	26	2.65	5.42
2004	274	1575	20+3	4.15	0.61	16	0.77	5.42
2004	255	1588	20	4.13	0.61	35	0.76	5.42
2004	251	1592	20	5.8	0.85	23	1.07	5.42
2004	234	1606	20+5	4.97	0.73	33	0.92	5.42
2004	230	1610	20+4	6.84	1.01	25	1.26	5.42
2005	184	1625	20+6	3.65	0.54	29	0.67	5.42
2005	177	1632	20+6	6.33	0.93	25	1.17	5.42
2005	169	1639	20+3	8.76	1.29	38	1.62	5.42
2005	163	1645	20+3	8.47	1.24	28	1.56	5.42
2005	155	1652	20+4	7.67	1.13	26	1.42	5.42
2005	153	1654	20	6.66	0.98	28	1.23	5.42
2005	148	1658	20+4	5.72	0.84	25	1.06	5.42
2005	138	1666	20+3	7.72	1.14	27	1.42	5.42
2005	130	1673	20+5	6.96	1.02	23	1.28	5.42
2005	114	1688	20	7.48	1.1	33	1.38	5.42
2005	113	1689	20	4.91	0.72	33	0.91	5.42
2005	100	1701	20+3	7.92	1.16	41	1.46	5.42
2005	97	1703	20+1	3.83	0.56	26	0.71	5.42
2005	89	1710	20	4.65	0.68	28	0.86	5.42
2005	87	1712	20+6	4.35	0.64	21	0.80	5.42
2005	76	1720	20+6	3.21	0.47	26	0.59	5.42
2005	52	1739	20+3	8.01	1.18	21	1.48	5.42
2005	34	1756	20+3	7.3	1.07	37	1.35	5.42
2005	19	1770	20+2	4.05	0.59	42	0.75	5.42
2005	15	1774	20+6	5.47	0.8	29	1.01	5.42
2005	7	1780	20+3	6.59	0.97	34	1.22	5.42
2005	4	1783	20+1	2.82	0.42	36	0.52	5.42
2005	3	1784	20+1	4.14	0.61	27	0.76	5.42
2005	360	1792	20	8.09	1.19	29	1.49	5.42
2005	344	1805	20	4.48	0.71	32	0.83	5.42
2005	328	1815	20+2	9.03	1.33	22	1.67	5.42
2005	326	1817	20+5	3.91	0.58	30	0.72	5.42
2005	300	1839	20+5	5.42	0.8	31	1.00	5.42
2005	296	1843	20+2	3.46	0.51	24	0.64	5.42
2005	263	1875	20+1	10.71	1.58	38	1.98	5.42
2005	244	1891	20+6	6.41	0.94	22	1.18	5.42
2005	238	1897	20+1	6.56	0.96	40	1.21	5.42
2005	224	1910	20+3	5.59	0.82	32	1.03	5.42
2005	217	1915	20+1	6.84	1.01	26	1.26	5.42
2005	206	1924	20	6.23	0.92	41	1.15	5.42
2005	202	1927	20	10.7	1.57	32	1.97	5.42
2006	175	1936	20+5	38.33	5.64	27	7.07	5.42
2006	168	1940	20+1	54.43	8	29	10.04	5.42

2006	158	1946	20	9.94	1.46	37	1.83	5.42
2006	149	1955	20+1	3.23	0.48	24	0.60	5.42
2006	137	1962	20	6.8	0.76	31	1.25	5.42
2006	131	1969	20+6	4.62	0.68	39	0.85	5.42
2006	126	1970	20+4	3.7	0.54	32	0.68	5.42
2006	127	1970	20+4	3.93	0.58	32	0.73	5.42
2006	122	1973	20+6	4.43	0.65	26	0.82	5.42
2006	121	1976	20+2	6.3	0.93	37	1.16	5.42
2006	120	1977	20	8.78	1.29	22	1.62	5.42
2006	92	1998	20+2	4.36	0.64	22	0.80	5.42
2006	90	2000	20+4	4.81	0.71	27	0.89	5.42
2006	71	2017	20+4	7.22	1.06	19	1.33	5.42
2006	68	2020	20	3.47	0.51	35	0.64	5.42
2006	40	2041	20+5	3.33	0.49	28	0.61	5.42
2006	36	2042	20+6	5.05	0.74	30	0.93	5.42
2006	35	2043	20+0	3.33	0.49	26	0.61	5.42
2006	30	2048	20+2	5.71	0.84	23	1.05	5.42
2006	29	2049	20+6	6.36	0.94	24	1.17	5.42
2006	25	2053	20+4	5.74	0.84	29	1.06	5.42
2006	10	2062	20	6.13	0.9	38	1.13	5.42
2006	9	2063	20+1	5.11	0.75	34	0.94	5.42
2006	8	2065	20+4	11.68	1.72	28	2.15	5.42
2006	331	2071	20+6	5.41	0.8	32	1.00	5.42
2006	327	2073	20	8.56	1.26	37	1.58	5.42
2006	311	2085	20+4	4.2	0.59	35	0.77	5.42
2006	282	2107	20+4	2.96	0.44	40	0.55	5.42
2006	278	2111	20+2	3.71	0.54	29	0.68	5.42
2006	277	2112	20+5	4.67	0.69	19	0.86	5.42
2006	270	2118	20+1	5.77	0.85	27	1.06	5.42
2006	258	2127	20+2	7.09	1.04	26	1.31	5.42
2006	253	2132	20+3	4.6	0.68	26	0.85	5.42
2006	252	2132	20+3	4.71	0.69	26	0.87	5.42
2006	251	2134	20+4	5.26	0.77	29	0.97	5.42
2006	231	2150	20+1	4.1	0.6	29	0.76	5.42
2006	218	2159	20	4.86	0.71	40	0.90	5.42
2006	209	2167	20+4	4.36	0.64	28	0.80	5.42
2006	207	2169	20+4	6.05	0.89	25	1.12	5.42
2006	187	2189	20+2	8.94	1.31	29	1.65	5.42
2007	212	2195	20+1	4.36	0.64	20	0.80	5.42
2007	211	2196	20+2	5.86	0.86	29	1.08	5.42
2007	209	2198	20+6	8.51	1.25	36	1.57	5.42
2007	199	2205	20+3	9.29	1.37	24	1.71	5.42
2007	181	2220	20+6	5.87	0.86	30	1.08	5.42
2007	174	2225	20+1	10.32	1.52	31	1.90	5.42
2007	147	2246	20+6	4.84	0.71	25	0.89	5.42
2007	93	2282	20+1	4.1	0.62	21	0.76	5.42
2007	86	2287	20+3	4.19	0.62	28	0.77	5.42
2007	77	2294	20+6	4.45	0.65	30	0.82	5.42
2007	75	2295	20+5	6.97	1.02	39	1.29	5.42
2007	50	2315	20+5	8.32	1.22	29	1.54	5.42

2007	47	2318	20+3	7.58	1.12	27	1.40	5.42
2007	36	2328	20+1	4.06	0.6	28	0.75	5.42
2007	34	2330	20+3	5.34	0.78	23	0.99	5.42
2007	13	2347	20+4	7.13	1.05	27	1.32	5.42
2007	2	2357	20+6	14.47	2.13	39	2.67	5.42
2007	408	2359	20+2	4.9	0.72	20	0.90	5.42
2007	401	2365	20+2	6.2	0.91	25	1.14	5.42
2007	384	2376	20	9.9	1.46	35	1.83	5.42
2007	373	2384	20+2	5.5	0.8	29	1.01	5.42
2007	366	2390	20+1	7.4	1.09	30	1.37	5.42
2007	365	2391	20+6	3.7	0.54	36	0.68	5.42
2007	347	2405	20+5	6.18	0.91	42	1.14	5.42
2007	332	2418	20+5	4.85	0.71	28	0.89	5.42
2007	319	2426	20+2	5.02	0.74	35	0.93	5.42
2007	315	2429	20+4	4.56	0.67	28	0.84	5.42
2007	310	2434	20+4	7.04	1.04	35	1.30	5.42
2007	306	2438	20	5.19	0.76	22	0.96	5.42
2007	293	2450	20+3	5.5	0.81	22	1.01	5.42
2007	275	2464	20+5	3.55	0.52	36	0.65	5.42
2007	271	2466	20+2	4.64	0.68	24	0.86	5.42
2007	259	2475	20+5	5.28	0.78	36	0.97	5.42
2007	256	2478	20	5.02	0.74	32	0.93	5.42
2007	247	2486	20+2	11.16	1.64	22	2.06	5.42
2007	243	2490	20+4	5.32	0.78	35	0.98	5.42
2007	224	2508	20+3	8.87	1.3	38	1.64	5.42
2008	17422	2519	20+2	6	0.88	24	1.11	5.42
2008	17147	2533	20	6.6	0.98	39	1.22	5.42
2008	17113	2539	20+1	4.6	0.68	23	0.85	5.42
2008	17044	2544	20+3	7.6	1.11	34	1.40	5.42
2008	17019	2547	20+2	4.2	0.62	36	0.77	5.42
2008	17004	2548	20+2	6.7	0.99	38	1.24	5.42
2008	16826	2568	20+1	15.3	2.25	29	2.82	5.42
2008	16825	2568	20+1	16.2	2.39	29	2.99	5.42
2008	187726	2575	20+2	4.7	0.69	30	0.87	5.42
2008	16698	2577	20+5	6.3	0.92	27	1.16	5.42
2008	16674	2582	20+3	5.5	0.81	37	1.01	5.42
2008	16671	2583	20+1	6.9	1.02	33	1.27	5.42
2008	16605	2592	20+6	5.6	0.82	18	1.03	5.42
2008	16572	2602	20	4.7	0.69	37	0.87	5.42
2008	16528	2605	20+3	4.2	0.62	27	0.77	5.42
2008	16484	2613	20	4.9	0.72	31	0.90	5.42
2008	16457	2615	20	6	0.88	29	1.11	5.42
2008	16424	2621	20+3	5.2	0.77	23	0.96	5.42
2008	16307	2631	20+1	6.7	0.98	26	1.24	5.42
2008	26	2639	20+3	3.9	0.58	34	0.72	5.42
2008	18460	2653	20+6	6.8	1	42	1.25	5.42
2008	18329	2658	20+4	10.9	1.6	28	2.01	5.42
2008	17922	2692	20+4	1.8	0.27	30	0.33	5.42
2008	17831	2701	20+4	5.5	0.81	37	1.01	5.42
2008	17778	2712	20	7.4	1.09	26	1.37	5.42

2008	17773	2714	20	4.9	0.72	38	0.90	5.42
2008	17565	2727	20	7.4	1.09	36	1.37	5.42
2009	20332	2736	20+3	4.8	1.4	28	0.89	5.42
2009	20306	2741	20+5	4.9	0.72	25	0.90	5.42
2009	20178	2756	20+1	5.7	0.83	30	1.05	5.42
2009	20122	2757	20+3	5	0.73	33	0.92	5.42
2009		2808	20+1	6.1	0.9	30	1.13	5.42
2009	19309	2814	20+2	8.5	1.25	27	1.57	5.42
2009	18769	2844	20+3	6.2	0.91	39	1.14	5.42
2009	18756	2847	20+4	4	0.59	46	0.74	5.42
2009	18692	2851	20+5	4.2	0.61	40	0.77	5.42
2010	22323	2900	20+2	4.5	0.66	28	0.83	5.42
2010	22311	2901	20+6	9.7	1.42	27	1.79	5.42
2010	22157	2922	20+1	4.7	0.7	27	0.87	5.42
2010	22088	2925	20+0	8.4	1.24	29	1.55	5.42
2010	22021	2929	20+2	4.9	0.72	29	0.90	5.42
2010	21549	2949	20+1	4.5	0.67	32	0.83	5.42
2009	20998	2974	20+2	4.6	0.68	36	0.85	5.42
2009	20606	3000	20+0	7.6	1.11	28	1.40	5.42
2009	20483	3011	20+3	6.7	0.98	42	1.24	5.42
2010	23934	3017	20	7.4	1.09	29	1.37	5.42
2010		3018	20+1	8.2	1.21	40	1.51	5.42
2010	23853	3019	20+1	5.2	0.77	38	0.96	5.42
2010	23865	3021	20	4.1	0.6	37	0.76	5.42
2010	23603	3038	20+4	3.3	0.5		0.61	5.42
2010	23490	3040	20+3	10.3	1.51	43	1.90	5.42
2010	23414	3046	20+2	6	0.88	28	1.11	5.42
2010	23333	3052	20+2	3.7	0.55	30	0.68	5.42
2010		3060	20+2	6	0.89	41	1.11	5.42
2011	25244	3081	20+2	3.95	0.58	38	0.73	5.42
2011	25189	3089	20+3	7.45	1.1	33	1.37	5.42
2011	25083	3095	20+3	1.9	0.28	28	0.35	5.42
2011	25038	3100	20+3	4.61	0.68	30	0.85	5.42
2011		3120	20+2	5.1	0.76	31	0.94	5.42
2011		3134	20+1	4.2	0.61	23	0.77	5.42
2011	24665	3137	20+6	4.8	0.71	32	0.89	5.42
2011		3145	20+4	4.8	0.71	32	0.89	5.42
2011	24498	3146	20+1	9.3	1.36	43	1.72	5.42
2011	24264	3173	20+6	3.7	0.55	26	0.68	5.42
2011	24180	3177	20+6	4.4	0.64	32	0.81	5.42
2011	24130	3179	20+2	7.5	1.11	27	1.38	5.42
2011	24051	3180	20	9.6	1.42	26	1.77	5.42
2012	1036	3194	20+6	6.72	0.99	29	1.24	5.42
2012	904	3210	20+3	3.72	0.55	26	0.69	5.42
2012	702	3230	20+4	4.36	0.64	36	0.80	5.42
2012	661	3234	20+2	5.43	0.8	30	1.00	5.42
2012	Thurm.A	3239	20+4	4.17	0.61	31	0.77	5.42
2012	500	3248	20	5.5	0.81	24	1.01	5.42
2012	369	3268	20+1	6.48	0.95	31	1.20	5.42
2012	0262	3279	20+2	3.78	0.56	33	0.70	5.42

2012	36	3287	20+6	3.95	0.58	36	0.73	5.42
2012	0094	3288	20+2	7.01	1.03	32	1.29	5.42
2012	515	3290	20+1	5.03	0.74	29	0.93	5.42
2012	30	3292	20+5	5.98	0.88	28	1.10	5.42

Tab 21 MoM of AFP in the 20th W.O.G

year	Amniotic Fluid	patient number	W.O.G	AFP	MoM of AFP, Giessen	matern al age	MoM of AFP, Jena	Median
2000	505	4	21+0	6	1.01		1.30	4.61
2000	498	10	21+2	7.3	1.23		1.58	4.61
2000	404	13	21+0	4.3	0.73	38	0.93	4.61
2000	487	18	21+0	3.7	0.62		0.80	4.61
2000	483	20	21+4	5.1	0.87		1.11	4.61
2000	462	27	21+3	4.3	0.73		0.93	4.61
2000	468	43	21+0	5	0.84		1.08	4.61
2000	474	45	21+0	9.1	1.55		1.97	4.61
2000	419	55	21+0	4.2	0.71		0.91	4.61
2000	406	61	21+4	4.7	0.8		1.02	4.61
2000	393	67	21+2	7.4	1.25	40	1.61	4.61
2000	396	70	21+1	8	1.36		1.74	4.61
2000	383	82	21+1	4.5	0.75		0.98	4.61
2000	373	99	21+2	3.7	0.63		0.80	4.61
2000	323	113	21+1	4.8	0.81		1.04	4.61
2000	288	129	21+6	0.9	1.53		0.20	4.61
2000	293	133	21+5	3.4	0.58		0.74	4.61
2000	270	146	21	3.9	0.66	22	0.85	4.61
2000	268	148	21+2	2.3	0.39		0.50	4.61
2000	246	162	21	4.5	0.63	39	0.98	4.61
2000	223	173	21+1	3.9	0.66	31	0.85	4.61
2000	220	174	21+3	4.5	0.76	32	0.98	4.61
2000	205	181	21+2	5.07	0.86	36	1.10	4.61
2000	214	183	21	2.7	0.46	19	0.59	4.61
2000	190	198	21+1	6.6	1.1	21	1.43	4.61
2000	190	201	21+1	6.5	1.1	21	1.41	4.61
2000	176	204	21+3	3.7	0.63	33	0.80	4.61
2000	151	217	21	6.6	0.92	19	1.43	4.61
2000	124	232	21+1	6.4	1.08	26	1.39	4.61
2000	121	237	21	3.7	0.51	37	0.80	4.61
2000	69	265	21+2	5.5	0.93	33	1.19	4.61
2000	55	269	21+3	2.2	0.37	37	0.48	4.61
2000	10	289	21+0	7	1.2	30	1.52	4.61
2000	4	291	21+1	4.3	0.73	29	0.93	4.61
2000	6	296	21+6	9	1.53	22	1.95	4.61
2001	245	297	21+5	5.01	0.85	32	1.09	4.61
2001	244	298	21+4	4.9	0.83	34	1.06	4.61
2001	265	304	21+2	8.88	1.51	21	1.93	4.61
2001	197	346	21+1	4.54	0.77	24	0.98	4.61
2001	198	349	21+1	12.56	2.13	30	2.72	4.61
2001	174	361	21+3	5.67	0.96	19	1.23	4.61

2001	111	405	21+4	4.24	0.72	18	0.92	4.61
2001	102	413	21+3	6.64	1.13	23	1.44	4.61
2001	106	415	21+2	5.13	0.87	40	1.11	4.61
2001	97	418	21+4	5.02	0.85	34	1.09	4.61
2001	91	420	21	9.84	1.4	28	2.13	4.61
2001	88	423	21+6	7.05	1.2	33	1.53	4.61
2001	31	463	21+4	2.61	0.44	32	0.57	4.61
2001	523	482	21+5	3.39	0.61	29	0.74	4.61
2001	446	541	21+3	4.15	0.74	35	0.90	4.61
2001	401	574	21+0	3.57	0.64	33	0.77	4.61
2001	380	584	21+6	3.05	0.55	26	0.66	4.61
2001	314	618	21	3.05	0.55	39	0.66	4.61
2001	309	623	21	4.25	0.72	23	0.92	4.61
2001	341	628	21+4	7.94	1.42	35	1.72	4.61
2001	298	632	21	10.33	1.48	31	2.24	4.61
2001	276	646	21	10.12	1.72	38	2.20	4.61
2002	259	654	21+2	4.91	0.88	38	1.07	4.61
2002	241	666	21+5	6.73	1.21	34	1.46	4.61
2002	228	670	21+1	4.56	0.82	38	0.99	4.61
2002	213	684	21+3	5.45	0.98	37	1.18	4.61
2002	184	699	21	6.03	1.08	25	1.31	4.61
2002	188	700	21+5	3.09	0.55	33	0.67	4.61
2002	161	717	21+6	3.09	0.55	30	0.67	4.61
2002	141	735	21+6	3.78	0.68	27	0.82	4.61
2002	118	757	21+1	3.88	0.7	32	0.84	4.61
2002	113	759	21+1	4.65	0.83	30	1.01	4.61
2002	73	787	21+2	5.95	1.07	20	1.29	4.61
2002	43	805	21+0	4.38	0.79	26	0.95	4.61
2002	34	813	21+1	1.72	0.31	28	0.37	4.61
2002	7	816	21+4	4.91	0.88	27	1.07	4.61
2002	6	817	21+4	2.56	0.46	31	0.56	4.61
2002	10	818	21	3.63	0.66	38	0.79	4.61
2002	495	839	21+4	7.81	1.4	34	1.69	4.61
2002	493	840	21+0	5.76	1.03	20	1.25	4.61
2002	451	867	21+2	3.33	0.6	32	0.72	4.61
2002	448	870	21	3.37	0.67	28	0.73	4.61
2002	442	872	21	4.29	0.77	34	0.93	4.61
2002	395	891	21+4	3.13	0.56	36	0.68	4.61
2002	388	904	21+1	3.18	0.57	34	0.69	4.61
2002	373	913	21+2	5.24	0.94	31	1.14	4.61
2002	346	925	21+3	8.26	1.48	25	1.79	4.61
2002	302	955	21+1	3.6	0.64	36	0.78	4.61
2002	296	958	21+3	4.51	0.81	42	0.98	4.61
2003	205	1003	21+2	3.86	0.69	32	0.84	4.61
2003	139	1015	21+4	6.78	1.22	24	1.47	4.61
2003	146	1019	21+1	8.52	1.53	25	1.85	4.61
2003	127	1042	21+0	3.11	0.56	32	0.67	4.61
2003	117	1045	21+3	3.48	0.62	38	0.75	4.61
2003	110	1053	21+4	4.32	0.77	26	0.94	4.61
2003	81	1076	21+6	6.77	1.21	36	1.47	4.61

2003	89	1083	21+0	4.76	0.85	22	1.03	4.61
2003	24	1099	21+3	2.86	0.51	33	0.62	4.61
2003	14	1106	21	2.54	0.45	33	0.55	4.61
2003	5	1110	21+1	4.12	0.74	25	0.89	4.61
2003	464	1147	21+1	3.16	0.57	23	0.69	4.61
2003	419	1178	21+3	2.03	0.36	21	0.44	4.61
2003	398	1190	21+0	7.92	1.42	31	1.72	4.61
2003	383	1199	21+6	2.13	0.38	17	0.46	4.61
2003	365	1214	21+1	2.6	0.47	22	0.56	4.61
2003	358	1220	21+2	5.64	1.01	38	1.22	4.61
2003	302	1254	21+3	4.23	0.76	34	0.92	4.61
2003	291	1262	21+3	5.12	0.92	36	1.11	4.61
2003	281	1269	21+5	4.01	0.72	36	0.87	4.61
2004	188	1302	21	5.85	1.05	37	1.27	4.61
2004	164	1319	21+6	3.66	0.66	32	0.79	4.61
2004	160	1323	21+3	7.05	1.26	36	1.53	4.61
2004	148	1333	21+4	3.57	0.64	29	0.77	4.61
2004	142	1338	21+5	3.25	0.58	36	0.70	4.61
2004	134	1343	21+6	3.47	0.62	30	0.75	4.61
2004	117	1356	21+1	3.8	0.68	33	0.82	4.61
2004	71	1390	21+6	1.39	0.25	35	0.30	4.61
2004	40	1417	21+2	5.23	0.94	36	1.13	4.61
2004	413	1461	21	4.85	0.87	32	1.05	4.61
2004	400	1473	21	13.67	2.45	31	2.97	4.61
2004	381	1487	21+5	4	0.72	20	0.87	4.61
2004	355	1507	21	5.28	0.95	25	1.15	4.61
2004	334	1525	21	3.47	0.62	34	0.75	4.61
2004	326	1533	21+2	2.39	0.43	30	0.52	4.61
2004	289	1564	21+4	4.66	0.84	33	1.01	4.61
2004	283	1566	21+1	4.98	0.89	36	1.08	4.61
2004	266	1581	21+1	2.47	0.44	24	0.54	4.61
2004	250	1593	21+2	3.75	0.67	26	0.81	4.61
2005	180	1629	21	5.38	0.96	35	1.17	4.61
2005	174	1634	21+1	5.41	0.97	25	1.17	4.61
2005	170	1638	21+2	4.4	0.79	41	0.95	4.61
2005	133	1670	21+4	2.89	0.52	32	0.63	4.61
2005	123	1680	21+3	4.19	0.75	23	0.91	4.61
2005	122	1681	21	6.54	1.17	32	1.42	4.61
2005	115	1687	21+2	4.96	0.89	36	1.08	4.61
2005	107	1694	21+3	5.83	1.04	26	1.26	4.61
2005	103	1698	21+1	3.31	0.59	29	0.72	4.61
2005	70	1724	21+2	4.76	0.85	22	1.03	4.61
2005	60	1732	21+6	5.33	0.95	23	1.16	4.61
2005	44	1746	21+3	5.86	1.05	28	1.27	4.61
2005	18	1771	21+0	3	0.54	21	0.65	4.61
2005	10	1779	21+1	6.48	1.16	25	1.41	4.61
2005	354	1797	21+2	2.99	0.54	34	0.65	4.61
2005	339	1809	21+3	6.08	1.09	35	1.32	4.61
2005	336	1812	21+4	5.34	0.96	33	1.16	4.61
2005	315	1825	21+3	3	0.54	33	0.65	4.61

2005	287	1850	21+3	3.41	0.61	20	0.74	4.61
2005	281	1856	21+3	3.73	0.67	35	0.81	4.61
2005	275	1862	21+2	6.75	1.21	25	1.46	4.61
2005	267	1870	21+3	7	1.25	29	1.52	4.61
2005	249	1888	21+6	5.02	0.9	33	1.09	4.61
2005	248	1889	21	8.15	1.46	34	1.77	4.61
2005	234	1901	21+3	7.7	1.38	24	1.67	4.61
2005	231	1904	21+3	5.52	0.99	40	1.20	4.61
2005	211	1921	21+1	3.61	0.65	20	0.78	4.61
2005	199	1930	21	3.68	0.66	20	0.80	4.61
2006	159	1945	21	2.93	0.52	30	0.64	4.61
2006	133	1964	21	4.49	0.8	43	0.97	4.61
2006	134	1965	21+4	8.91	1.6	41	1.93	4.61
2006	116	1980	21	9.17	1.64	23	1.99	4.61
2006	87	2003	21+5	3.66	0.66	37	0.79	4.61
2006	80	2009	21	5.74	1.03	29	1.25	4.61
2006	61	2026	21	2.93	0.52	27	0.64	4.61
2006	52	2031	21	3.85	0.69	34	0.84	4.61
2006	41	2040	21+3	3.16	0.57	36	0.69	4.61
2006	320	2077	21+2	4.99	0.9	22	1.08	4.61
2006	310	2086	21+4	4.74	0.85	19	1.03	4.61
2006	301	2094	21+1	2.22	0.4	21	0.48	4.61
2006	298	2096	21+5	5.78	1.04	31	1.25	4.61
2006	297	2097	21	4.69	0.84	27	1.02	4.61
2006	285	2105	21	4.79	0.86	32	1.04	4.61
2006	242	2141	21	4.56	0.82	32	0.99	4.61
2006	238	2144	21	7.02	1.26	23	1.52	4.61
2006	206	2170	21+4	4.4	0.79	29	0.95	4.61
2006	199	2174	21+0	8.39	1.5	25	1.82	4.61
2006	180	2191	21+1	4.94	0.8	29	1.07	4.61
2007	189	2214	21+1	6.32	1.13	36	1.37	4.61
2007	149	2244	21+1	4.16	0.75	30	0.90	4.61
2007	136	2256	21+2	4.21	0.75	32	0.91	4.61
2007	105	2276	21	3.98	0.71	38	0.86	4.61
2007	92	2283	21+1	3.55	0.64	29	0.77	4.61
2007	79	2292	21	3.48	0.62	31	0.75	4.61
2007	73	2296	21+5	4.87	0.87	39	1.06	4.61
2007	72	2297	21+6	3.81	0.68	23	0.83	4.61
2007	67	2302	21+5	7.45	1.34	29	1.62	4.61
2007	51	2314	21	8.73	1.56	23	1.89	4.61
2007	46	2319	21+2	4.33	0.78	33	0.94	4.61
2007	27	2335	21	4.11	0.74	38	0.89	4.61
2007	22	2340	21	5.33	0.96	21	1.16	4.61
2007	407	2360	21+6	4.2	0.75	33	0.91	4.61
2007	405	2362	21+3	22.3	4	23	4.84	4.61
2007	346	2406	21+3	6.46	1.16	34	1.40	4.61
2007	338	2412	21+4	4.24	0.76	25	0.92	4.61
2007	327	2419	21+3	4.38	0.79	34	0.95	4.61
2007	324	2422	21+1	8.7	1.56	27	1.89	4.61
2007	320	2425	21+0	6.2	1.11	29	1.34	4.61

2007	314	2430	21+1	3.13	0.56	21	0.68	4.61
2007	273	2496	21+6	4.57	0.82	27	0.99	4.61
2007	217	2515	21	6.69	1.2	27	1.45	4.61
2007	215	2517	21+1	5.02	0.9	30	1.09	4.61
2008	17393	2524	21+1	4.7	0.84	27	1.02	4.61
2008	17278	2525	21+1	4.7	0.85	24	1.02	4.61
2008	17092	2541	21+6	5.7	1.03	20	1.24	4.61
2008	16696	2576	21+1	5.3	0.95	19	1.15	4.61
2008	16594	2591	21	5.2	0.94	18	1.13	4.61
2008	16339	2627	21+1	4.7	0.84	26	1.02	4.61
2008	18424	2656	21+1	7.7	1.38	38	1.67	4.61
2008	18218	2668	21	6	1.07	28	1.30	4.61
2008	18160	2673	21+2	3.1	0.56	21	0.67	4.61
2008	18115	2679	21+5	4.4	0.78	33	0.95	4.61
2009	20287	2745	21+2	5.8	1.03	36	1.26	4.61
2009	19901	2773	21+3	4	0.72	33	0.87	4.61
2009	19571	2790	21+4	4.2	0.75	39	0.91	4.61
2009	19478	2800	21+1	4.4	0.79	33	0.95	4.61
2009	19411	2806	21+3	3.2	0.56	27	0.69	4.61
2009	19171	2816	21+3	6.1	1.09	25	1.32	4.61
2009	19184	2817	21+2	3.1	0.55	28	0.67	4.61
2009	19086	2823	21+6	3.3	0.59	34	0.72	4.61
2009	18902	2832	21+1	3.1	0.56	36	0.67	4.61
2009	18825	2837	21+1	4	0.72	32	0.87	4.61
2010	22398	2893	21	3.8	0.68	23	0.82	4.61
2010	22298	2906	21+3	45.4	8.13	31	9.85	4.61
2010	22128	2918	21+1	5.7	1.03	35	1.24	4.61
2010	22017	2928	21+6	5.2	0.94	30	1.13	4.61
2010	21912	2933	21+1	5	0.9	39	1.08	4.61
2010	21442	2958	21+6	6	1.08	28	1.30	4.61
2009	21301	2963	21+4	5	0.89	43	1.08	4.61
2009	20997	2977	21	10.2	1.82	40	2.21	4.61
2009	20879	2979	21	5	0.9	39	1.08	4.61
2009	20807	2988	21+5	3.8	0.68	26	0.82	4.61
2009	20542	3006	21+3	5.4	0.96	32	1.17	4.61
2010	2370	3027	21+3	4.4	0.79	28	0.95	4.61
2010	23751	3029	21+1	6.2	1.12	26	1.34	4.61
2010	23738	3032	21+1	6.1	1.1	25	1.32	4.61
2010	23091	3058	21+1	4.1	0.73	27	0.89	4.61
2010	23033	3064	21+4	5.1	0.92	27	1.11	4.61
2010	22938	3070	21+6	5.7	1.24	30	1.24	4.61
2011	25225	3083	21+4	3.38	0.61	27	0.73	4.61
2011	25192	3088	21+5	5.84	1.05	33	1.27	4.61
2011		3128	21+1	2.6	0.47	32	0.56	4.61
2011	24712	3130	21+3	3.9	0.7	31	0.85	4.61
2011	24645	3138	21+2	4.2	0.75	38	0.91	4.61
2011	24597	3142	21+4	4.9	0.88	39	1.06	4.61
2011	24505	3147	21+3	3.6	0.65	24	0.78	4.61
2012	Tank.N	3207	21+2	3.72	0.67	23	0.81	4.61
2012	1458	3217	21	5.24	0.94	33	1.14	4.61

2012	710	3225	21+4	3.78	0.68	23	0.82	4.61
2012	508	3244	21+1	6.74	1.21	35	1.46	4.61
2012	486	3250	21	6.45	1.17	28	1.40	4.61
2012	417	3261	21+3	3.79	0.68	30	0.82	4.61
2012	403	3262	21+6	5.82	1.04	26	1.26	4.61
2012	289	3266	21+2	4.67	0.84	28	1.01	4.61
2012	0010	3272	21+5	5.63	1.01	39	1.22	4.61
2012	0313	3276	21	4.02	0.72	26	0.87	4.61
2012	0227	3278	21+3	4.2	0.75	34	0.91	4.61
2012	180	3284	21	3.74	0.67	40	0.81	4.61
2012	J08-0339	3286	21+1	3.19	0.57	41	0.69	4.61

Tab 22 MoM of AFP in the 21st W.O.G

year	Amniotic Fluid	patient number	W.O.G	AFP	MoM of AFP, Giessen	maternal age	MoM of AFP, Jena	Median
2000	348	88	22+6	4.4	1.04		1.15	3.84
2000	300	137	22+0	3.8	0.89		0.99	3.84
2000	96	252	22+5	1.8	0.42	15	0.47	3.84
2000	90	254	22+4	5.5	1.29	27	1.43	3.84
2001	227	333	22+1	3.63	0.87	32	0.95	3.84
2001	217	341	22+5	6.81	1.63	37	1.77	3.84
2001	22	471	22	1.88	0.45	36	0.49	3.84
2001	467	528	22+4	2.9	0.72	25	0.76	3.84
2001	424	558	22+2	3.66	0.91	34	0.95	3.84
2001	277	643	22+1	3.16	0.75	29	0.82	3.84
2002	260	653	22	5.02	1.24	25	1.31	3.84
2002	257	656	22+1	4.87	1.21	38	1.27	3.84
2002	170	709	22+5	2.73	0.68	29	0.71	3.84
2002	110	761	22+5	30.17	7.47	30	7.86	3.84
2002	96	767	22+6	3.3	0.82	35	0.86	3.84
2002	467	860	22+5	2.51	0.62	34	0.65	3.84
2002	397	890	22+2	4.1	1.01	22	1.07	3.84
2002	403	892	22	3.84	0.95	36	1.00	3.84
2003	209	1002	22+1	2.88	0.71	24	0.75	3.84
2003	187	1010	22	3.53	0.87	37	0.92	3.84
2003	111	1051	22+3	4.1	1.01	25	1.07	3.84
2003	92	1084	22+5	4.23	1.05	31	1.10	3.84
2003	371	1210	22+5	4.6	1.14	31	1.20	3.84
2003	292	1261	22	3.46	0.86	29	0.90	3.84
2003	279	1270	22+3	2.79	0.69	33	0.73	3.84
2004	144	1337	22	3.57	0.88	36	0.93	3.84
2004	25	1432	22+4	5.28	1.13	37	1.38	3.84
2004	17	1439	22	4.04	1.65	25	1.05	3.84
2004	7	1446	22+4	2.91	0.72	31	0.76	3.84
2004	324	1535	22+3	1.9	0.47	27	0.49	3.84
2004	306	1551	22+4	3.58	0.89	32	0.93	3.84
2004	243	1599	22+1	6.16	1.52	23	1.60	3.84
2005	161	1647	22	3.03	0.75	33	0.79	3.84
2005	65	1728	22+4	2.46	0.61	22	0.64	3.84

2005	55	1737	22	5.68	1.41	29	1.48	3.84
2005	25	1765	22	12.64	3.13	22	3.29	3.84
2005	361	1791	22+3	6.41	1.59	30	1.67	3.84
2005	323	1819	22	5.63	1.39	41	1.47	3.84
2005	279	1858	22+6	2.45	0.61	32	0.64	3.84
2005	210	1922	22+1	3.57	0.88	36	0.93	3.84
2005	201	1928	22+3	5.76	1.43	21	1.50	3.84
2005	194	1933	22	5.96	1.47	40	1.55	3.84
2006	102	1991	22+3	5.63	1.39	27	1.47	3.84
2006	1	2070	22+1	6.22	1.45	34	1.62	3.84
2006	181	2190	22+0	4.38	1.08	25	1.14	3.84
2007	150	2243	22	2.23	0.55	41	0.58	3.84
2007	106	2275	22	3.23	0.8	21	0.84	3.84
2007	57	2309	22+3	3.56	0.88	32	0.93	3.84
2007	364	2392	22+4	3.3	0.81	19	0.86	3.84
2008	16808	2572	22	5.7	1.4	32	1.48	3.84
2008	16501	2609	22+6	6.2	1.53		1.61	3.84
2008	18457	2651	22	3.3	0.81	29	0.86	3.84
2008	18236	2666	22	4.9	1.21	29	1.28	3.84
2009	19729	2777	22	2.7	0.67	24	0.70	3.84
2009	18616	2860	22+2	3.2	0.78	40	0.83	3.84
2010	22830	2867	22+6	4.5	1.1	24	1.17	3.84
2009	21291	2964	22	4.7	1.16	28	1.22	3.84
2009	21123	2970	22+6	3.3	0.82	29	0.86	3.84
2011	24931	3113	22+6	5.39	1.33	23	1.40	3.84
2011	24894	3115	22	5.8	1.43	28	1.51	3.84
2011	24754	3127	22+5	3.1	0.76	27	0.81	3.84
2011	24701	3136	22	6.8	1.69	30	1.77	3.84
2011	24458	3152	22+4	6.6	1.63	28	1.72	3.84
2012	J12-1064	3190	22+5	3.96	0.98	39	1.03	3.84
2012	0342	3274	22+3	3.22	0.8	19	0.84	3.84

Tab 23 MoM of AFP in the 22th W.O.G

year	Amniotic Fluid	patient number	W.O.G	AFP	MoM of AFP, Giessen	maternal age	MoM of AFP, Jena	Median
2000	421	56	23+3	2.2	0.97		0.73	3
2000	289	131	23	4.2	0.99		1.40	3
2000	226	175	23+6	1.9	0.63	22	0.63	3
2000	158	214	23	3	0.71	29	1.00	3
2001	3	475	23	5.5	1.31	27	1.83	3
2001	460	532	23+1	2.41	0.49	42	0.80	3
2001	386	583	23+6	1.6	0.32	34	0.53	3
2001	334	608	23+4	3.22	0.65	22	1.07	3
2002	485	847	23	4.99	1.24	35	1.66	3
2003	330	1235	23+6	2.49	0.5	35	0.83	3
2004	94	1373	23+5	2.96	0.6	28	0.99	3
2005	126	1677	23	3.97	0.8	15	1.32	3
2005	48	1743	23+3	2.86	0.58	32	0.95	3
2006	104	1990	23	3.41	0.69	32	1.14	3

2006	78	2010	23+1	5.03	1.02	27	1.68	3
2007	166	2230	23+5	2.76	0.56	23	0.92	3
2007	377	2381	23	7.9	1.6	23	2.63	3
2007	260	2474	23+2	3.99	0.81	34	1.33	3
2007	248	2485	23	10.1	2.04	41	3.37	3
2008	16475	2611	23+3	3	0.6	37	1.00	3
2008	18373	2660	23+3	6.5	1.32	29	2.17	3
2008	18140	2675	23+4	2.8	0.56	28	0.93	3
2009	19421	2802	23+6	2.5	0.5	32	0.83	3
2010	22643	2879	23	3.2	0.64	42	1.07	3
2010	22373	2895	23+3	4.4	0.89	42	1.47	3
2010	21426	2959	23	4.1	0.83	39	1.37	3
2009	20512	3009	23+5	2.7	0.54	38	0.90	3
2011	24316	3165	23+5	2.53	0.51	33	0.84	3
2012	1013	3196	23+4	2.69	0.6	39	0.90	3

Tab 24 MoM of AFP in the 23th W.O.G

year	Amniotic Fluid	patient number	W.O.G	AFP	MoM of AFP, Giessen	matern al age	MoM of AFP, Jena	Median
2000	449	37	24	3.6	1.58		1.33	2.7
2000	351	110	24+6	2.1			0.78	2.7
2000	161	202	24+2	2.8	1.4	20	1.04	2.7
2000	88	259	24+1	2.1	1.05	33	0.78	2.7
2001	85	422	24+0	232.6	101.13	21	86.15	2.7
2001	440	547	24+1	4.71		32	1.74	2.7
2003	12	1107	24	2.6		31	0.96	2.7
2004	207	1289	24+1	1.89	0.38	28	0.70	2.7
2008	17226	2528	24+3	5.9		28	2.19	2.7
2009	18810	2841	24+5	1.7		21	0.63	2.7

Tab 25 MoM of AFP in the 24th W.O.G

year	Amniotic Fluid	patient number	W.O.G	AFP	MoM of AFP, Giessen	matern al age	MoM of AFP, Jena	Median
2000	431	41	25+1	8.9			2.71	3.285
2000	408	60	25	3.6		35	1.10	3.285
2004	270	1578	25+5	2.97		26	0.90	3.285
2011	25213	3086	25+3	1.57		40	0.48	3.285

Tab 26 MoM of AFP in the 25th W.O.G

year	Amniotic Fluid	patient number	W.O.G	AFP	MoM of AFP, Giessen	matern al age	MoM of AFP, Jena	Median
2000	367	107	26+1	3.3			1.64	2.01
2002	203	690	26+6	2.68		37	1.33	2.01
2004	360	1502	26+3	1.82		25	0.91	2.01
2005	308	1832	26	1.33		23	0.66	2.01
2007	393	2367	26+3	1.2		23	0.60	2.01
2008	18352	2663	26+6	2.2		27	1.09	2.01

2009	19376	2811	26+2	1.4		32	0.70	2.01
2009	20775	2986	26+2	2.2		19	1.09	2.01

Tab 27 MoM of AFP in the 26th W.O.G

year	Amniotic Fluid	patient number	W.O.G	AFP	MoM of AFP, Giessen	matern al age	MoM of AFP, Jena	Median
2000	457	30	27	1.7		43	0.89	1.9
2001	27	467	27+4	1.26		32	0.66	1.9
2001	389	580	27+1	5.63	0	22	2.96	1.9
2004	318	1541	27	0.74		33	0.39	1.9
2009	20344	2734	27+6	0.5		33	0.26	1.9
2009	19318	2813	27+4	2.1		25	1.11	1.9
2009	18687	2853	27+5	2.1		22	1.11	1.9
2009	18625	2855	27+1	0.6		37	0.32	1.9
2010	23621	3035	27	2.3		33	1.21	1.9
2011	24380	3160	27+3	3.18		22	1.67	1.9

Tab 28 MoM of AFP in the 27th W.O.G

year	Amniotic Fluid	patient number	W.O.G	AFP	MoM of AFP, Giessen	matern al age	MoM of AFP, Jena	Median
2001	476	521	28+4	1.97		23	1.25	1.57
2002	229	669	28+1	3.21		30	2.04	1.57
2002	136	744	28+3	1.57		27	1.00	1.57
2011	24915	3107	28+4	0.42		27	0.27	1.57
2011	24482	3150	28+4	1.2		31	0.76	1.57

Tab 29 MoM of AFP in the 28th W.O.G

year	Amniotic Fluid	patient number	W.O.G	AFP	MoM of AFP, Giessen	matern al age	MoM of AFP, Jena	Median
2007	137	2255	29	3.56		30	1.00	3.56

Tab 30 MoM of AFP in the 29th W.O.G

year	Amniotic Fluid	patient number	W.O.G	AFP	MoM of AFP, Giessen	matern al age	MoM of AFP, Jena	Median
2008	17874	2697	30+3	4.8		31	4.80	1
2009	18895	2830	30+2	0.6		19	0.60	1
2009	21253	2965	30+6	1		22	1.00	1

Tab 31 MoM of AFP in the 30th W.O.G

year	Amniotic Fluid	patient number	W.O.G	AFP	MoM of AFP, Giessen	matern al age	MoM of AFP, Jena	Median
2001	14	472	31+3	1.32		28	1.14	1.16
2002	254	658	31	1.16		30	1.00	1.16
2008	18176	2670	31+1	0.7		29	0.60	1.16
2011	24929	3108	31+3	0.33		33	0.28	1.16
2012	645	3237	31+1	1.82		33	1.57	1.16

Tab 32 MoM of AFP in the 31th W.O.G

year	Amniotic Fluid	patient number	W.O.G	AFP	MoM of AFP, Giessen	matern al age	MoM of AFP, Jena	Median
2000	149	221	32+4	0.35		24	0.88	0.4
2003	463	1148	32	1.13		19	2.83	0.4
2010	22742	2872	32+2	0.4		26	1.00	0.4

Tab 33 MoM of AFP in the 32th W.O.G

year	Amniotic Fluid	patient number	W.O.G	AFP	MoM of AFP, Giessen	matern al age	MoM of AFP, Jena	Median
2000	115	236	33+1	0.8		30	1.00	0.8
2001	2	476	33	0.6		36	0.75	0.8
2006	302	2093	33+5	1.37		32	1.71	0.8

Tab 34 MoM of AFP in the 33h W.O.G

year	Amniotic Fluid	patient number	W.O.G	AFP	MoM of AFP, Giessen	maternal age	MoM of AFP, Jena	Median
2001	303	625	34+1	1.17		24	1.16	1.005
2006	20	2055	34	0.84		34	0.84	1.005

Tab 35 MoM of AFP in the 34h W.O.G

year	Amniotic Fluid	patient number	W.O.G	AFP	MoM of AFP, Giessen	maternal age	MoM of AFP, Jena	Median
Keine Daten sind vorhanden								

Tab 36 MoM of AFP in the 35h W.O.G

year	Amniotic Fluid	patient number	W.O.G	AFP	MoM of AFP, Giessen	maternal age	MoM of AFP, Jena	Median
2003	465	1146	36+3	0.4			1.00	0.4

Tab 37 MoM of AFP in the 36th W.O.G

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Lebenslauf

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Ort, Datum Unterschrift

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Jena, den……